



SREE NARAYANA COLLEGE

(Affiliated to the University of Calicut)
NAAC Accredited with B Grade

Erattakulam P.O, Alathur 678682

sncalathur1970@gmail.com

04922 222 391

www.sncollegealathur.ac.in



CRITERION: 1

CURRICULAR ASPECTS:

*CURRICULAR PLANNING
AND IMPLEMENTATION*

**SREE NARAYANA COLLEGE**

(Affiliated to the University of Calicut)
NAAC Accredited with B Grade

Erattakulam P.O, Alathur 678682

sncalathur1970@gmail.com

04922 222 391

www.sncollegealathur.ac.in

CRITERION	1: Curricular Aspects
KEY INDICATOR	1.1: Curricular Planning and Implementation
METRIC NO	1.1.1: The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment
FILE DESCRIPTION	<ul style="list-style-type: none">• Copy of Action Plan of Departments• Copy of Minutes• Link for additional Information

TABLE OF CONTENTS

SL.NO	CONTENTS
1	MINUTES
2	ACTION PLAN
3	ACADEMIC CALENDER
4	MASTER TIME TABLE
5	BOARD OF STUDIES
6	DEPARTMENT TIMETABLE
7	WORK LOAD
8	TEACHING PLAN
9	INTERNAL QUESTION PAPER AND ANSWER SHEETS
10	ASSIGNMENT AND SEMINAR
11.	GRIEVANCE CELL REPORT
12.	SYLLABUS

Minutes of IQAC

July 2020

Minutes of the meeting of IQAC held on 02/07/2020

Decisions

1. The Action Plan prepared in the last quarter of the academic year 2019-2020 was approved and it was decided to conduct various activities charted out in the Action Plan.
2. It was decided to observe various days of national and international importance.
3. It was decided to conduct various academic oriented programmes like seminars, workshops and conferences.
4. Decided to approve of the setting up of a vegetable garden by the Department of Zoology
5. It was decided to conduct Tutorial Meetings every month.
6. Decided to conduct Water Quality Analysis under the auspices of the Department of Microbiology to check the microbial quality of drinking water wells in the surrounding areas during rainy season.
7. Decide to offer support to financially weak students through endeavours like Mid Day Meal Programme, financial assistance to needy students and scholarships to deserving students of financially weak background.
8. PG Dept. of Commerce will conduct a Certificate Course: IT and GST Filing, for 30 students from 04/07/2020
9. NSS Units of our college decided to conduct an awareness programme among students and kudumbasree units of Kavassery and Alathur Panchayath for self-employment (on Mushroom cultivation) on 17/07/2020



Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

August 2020

Minutes of the meeting of IQAC held on 03/08/2020

Decisions

1. Decided to conduct Class PTA meetings for the existing batches.
2. NSS units of the college decided to conduct a programme on Monsoon Diseases and COVID 19 to create awareness among students and Kudumbasree Units (Local Self-employment units of Women) of Alathur and Kavassery Panchayath
3. It was decided to organise a webinar on 'Career Choices and Planning during Recession' on 07 August 2020
4. Decided to organise environment related programmes to create an awareness among the students to preserve this precious nature.



Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

September 2020

Minutes of the meeting of IQAC held on 23/09/2020

1. A talk series on Gender related topics was planned to be held in the following months by the Department of English to sensitize the students on these topics.
2. Considering the COVID Pandemic situation, since students were not available at the college, it was decided to conduct Onam Celebration digitally. The programme to be organised by the students of the Department of Zoology.
3. Department of Commerce to organise a one hour online industry workshop – Gateway to Financial Freedom – to throw light on the fundamentals of Capital Market and investment.
4. The Entrepreneurship Development Club to conduct a Quiz Competition 2020 to identify students with entrepreneurial skills so as to impart basic knowledge to them in that area.



Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

October 2020

Minutes of the meeting of IQAC held on 08/10/2020

1. Department of Commerce to conduct a one day webinar on 'Professional Careers in Commerce' on 12.10.2020.
2. Also to conduct a one day webinar on 'Advanced Career in Commerce' on 26.11.2020
3. To Conduct various environment related programmes mainly by the Departments of Botany and Zoology like talks, quiz and caption contest.
4. To conduct Model examinations for the Third and Fifth Semester UG batches.
5. To conduct Remedial Classes for weak students.



Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

December 2020

Minutes of the meeting of IQAC held on 03/12/2020

1. All departments to conduct Bridge course for First semester classes which commenced late due to COVID pandemic.
2. An orientation programme to be given to the first semester students to enlighten them on the Credit Based Semester System to which they have been introduced too. Also to throw light on the various clubs and committees functioning in the college which would help them nurture and develop their talents, skills and aptitudes. The orientation programme is also intended to give them an awareness on the mode of functioning of the college and the discipline to be maintained within the college.
3. Department of Microbiology to organise a national Virtual Workshop on 'Gene Technology' on 04.01.2021



Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

January 2021

Minutes of the meeting of IQAC held on 01/01/2021

1. Department of Mathematics to organise a webinar series – Astra Season 2 – for postgraduate students. The webinar series to include five lectures and the first one to be held on 04.01.2021.
2. To conduct coaching camps in Cricket, Volleyball and Ball Badminton
3. Department of Botany to offer a short term course on Horticulture and Nursery Management.
4. Department of English in association with the Film Club of the college to conduct a film screening and discussion to get a technical awareness about cinema in general and also to understand the relevance of the subject matter it portrayed.
5. Reading Club to conduct a discussion on the book 'The Prophet' by Khalil Gibran. Also to organise more discussions in the coming months.
6. Decided to conduct Class PTA meetings.



Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

February 2021

Minutes of the meeting of IQAC held on 04/02/2021

1. A Theatre Workshop to be to be organised by the Department of English on 15.02.2021 to impart knowledge on the diverse theatrical techniques and also to get an idea about the different body skills required for performance.
2. To observe 'World Wetland Day' under the auspices of the Department of Zoology
3. Department of English will conduct a talk on gender and career building on 20/02/2021
4. Department of Mathematics will conduct certificate course on Latex from 01/03/2021



Principal
Sree Narayana College, Alathur
Palakkad- 678 692, Kerala

March 2021

Minutes of the meeting of IQAC held on 03/03/2021

To conduct Model Examination for Fourth and Sixth Semester batches.

1. To conduct Remedial Classes for weak students.
2. Women's Cell to organise programmes like Discussions, Talks, Open Forum as part of Women's day Celebration.
3. Various departments to organise programmes on Women's day.
4. It was decided to conduct the inauguration of the newly sanctioned B. Sc. Programme in Chemistry on 08.03.2021. Decided to invite Sri K R Gopinath Executive Member, S N Trusts as the Chief Guest.
5. Department of Botany to organise webinars on 'Endangered Species Management and Ecosystem' and 'Ethnobotany' on 11.03.2021.
6. Department of English to host a talk on 'How I am a Man Now' – by Adam Harry, the first Trans man pilot.
7. Department of Microbiology to organise an International Webinar on Nano Technology and Nano Toxicology.
8. Department of Microbiology to offer a Hands on Training on Molecular Biology Techniques to B Sc. Microbiology students on 05.04.2021
9. To organise awareness programmes on the need to give importance to health care especially in the pandemic situation.


Principal
Sree Narayana College, Alathur
Palakkad-678 692, Kerala

June 2021

Minutes of the meeting of IQAC held on 05/06/2021

1. It was decided to prepare the Action Plan for the academic year 2021- 2022.
2. It was decided to prepare the Annual Academic calendar.
3. To organise administrative level training programmes for the Office Staff.
4. World Environment Day to be observed befittingly by planting bamboo saplings.
5. Department of Physical Education to organise programmes on International Yoga Day.
6. Coaching class for Competitive Exams in Chemistry students of B Sc. Chemistry.



Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

SREE NARAYANA COLLEGE, ALATHUR

DEPARTMENT OF COMMERCE

ACTION PLAN OF DEPARTMENT ACTIVITIES 2021- 2022

SL.NO	PROPOSED ACTIVITY	PROPOSED MONTH
1.	ADD ON COURSE – GST FILING	JUNE
2.	CAREER AWARENESS PROGRAMME	JUNE
3	Certificate Course – Computerized accounting and Tally	JUNE
4	CLASS P.T.A (Final year and second year)	JULY
5	Career Opportunities in Recission	AUGUST
6	BUSINESS QUIZ	OCTOBER
7	WORKSHOP IN CONNECTION WITH ENTREPRENEURIAL ACTIVITY	OCTOBER
8	PHOTOGRAPHY COMPETITION IN CONNECTION WITH CO-OPERATIVE WEEK	NOVEMBER
9	BOOK REVIEW	DECEMBER
10	Gender Justice and Culture (Gender Forum)	January
11	Women’s Day Celebration	March

R. Binu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala



Sree Narayana College Alathur
Department of Mathematics
Action Plan for the Academic Year 2021-22(Astra Sea

Sl.No.	Name of the Programme	Name of Coordinator	Period
1	A workshop on GeoGebra	Krishnaprabha R	One day (July Second week)
2	JAM Coaching for UG Students	Manuraj S	One year programme
3	NET Coaching	Vaishnavi S	One year programme
4	Seminar Competition for UG and PG Students	Sucharitha R S	Monthly once programme
5	Youtube Channel for Department	Sucharitha R S	
6	Bridge Courses for UG and PG	Krishnaprabha R	At the beginning of each semester
7	Remedial Coaching for UG Students	Sucharitha R S (Mathematics), Sisira (Physics), Binusha (Statistics)	One Year programme
8	Webinar Series for Physics	Sisira	July-August
9	National Seminar	Vaishnavi S and Manjuraj S	November
10	Online Quiz Competition	II year PG students	January
11	Puzzle Contest for students	II year PG students	monthly Twice

ison 3)

Purpose

GeoGebra is a freely available, dynamic and interactive tool which can be used for teaching and learning. The main aim of this workshop is to introduce GeoGebra and discuss its applications for teaching Mathematics

This coaching is aimed to get good score in JAM entrance test. The objective of JAM is to provide admissions to M.Sc., Joint M.Sc.-Ph.D. Degree at the IITs and to the Integrated Ph.D. programmes at IISc

It reflects the importance of postgraduate education, particularly at research intensive universities and job opportunities in teaching and research fields

Seminar competition for the students greatly help them interact with present and ongoing advancements in the fields of interest

To publish the activities of the department

Bridge course is a teaching module which helps to close the gap between two levels of competence.

Improve the academic skills and linguistic proficiency of the students in various subjects. To raise their level of comprehension of basic subjects to provide a stronger foundation for further academic work.

To make interest on physics

1. To motivate students to do research in concerned areas.

2. This will help to all the students to decide their future course and their career with mathematics

1. To develop leadership quality and subject knowledge for PG students
2. Online quiz contest today is vastly perceived as a mind refreshing activity by the majority, especially during the lockdown

1. To Make Interest on Mathematics and Logic in various department students
2. Puzzles requiring greater mathematical skill and knowledge

12	Computer Literacy Programme , Usage of Smart Phones and Digital Money Transactions for neighbouring society	Krishnaprabha R	Two day programme (January 2022)
13	Women Empowerment, Gender Issues, Health and Hygiene	Manjuraj S	October (Three Sessions)
14	Short Term Course on LaTeX	Vaishnavi S	November (5day programm
15	Short Term Course on Python	Vaishnavi S	January

R. Binu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

1.To ensure social responsibility of college 2.To increase IT awareness and literacy 3.To facilitate mobile money transactions and QR transactions

To explicitly address women health, hygiene, and well-being

LaTeX is a typesetting system that has features letting you create scientific and technical documents in the right format. PG Students need this for doing their projects

Python is a high-level, general-purpose and a very popular programming language. Its language constructs as well as its object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.



Principal
Sree Narayana College, A. B. B. B.
Palakkad-678 682, Kerala

SN COLLEGE, ALATHUR
Work load for the month of June 2021

Name of the Teacher: Dr. Sisira S, Guest Lecturer (In contract), Department of Physics

Date	Day	Class	Topic	Online Platform
18/06/21	Friday	No class	Joining Date	
21/06/21	Monday	IInd Sem Maths/Chem	Module I: Sinusoidal waves, wavelength, phase, frequency	Google meet
22/06/21	Tuesday	IInd Sem Maths/Chem	Superposition of waves, amplitude and Intensity, derivation	Google meet
23/06/21	Wednesday	IInd Sem Maths/Chem	Interference, basic concepts: Constructive and destructive interference	Google meet
		EWM	Introduction to motion, Velocity, Uniform velocity, non uniform velocity	Google meet
24/06/21	Thursday	IInd Sem Maths/Chem	Youngs experiment, path difference calculation	Google meet
		EWM	Acceleration, Uniform and non uniform acceleration, examples	Google meet
25/06/21	Friday	IInd Sem Maths/Chem	Fresnel's double mirror, optical path length, Interference in thin films	Google meet
		EWM	Motion in a vertical plane, Projectile motion	Google meet
28/06/21	Monday	IInd Sem Maths/Chem	Newton's rings formation and derivation	Google meet
29/06/21	Tuesday	IInd Sem Maths/Chem	No class	Exam invigilation duty
30/06/21	Wednesday	IInd Sem Maths/Chem	No class	Exam invigilation duty
		EWM		


Principal
SN Narayana College Alathur

SREE NARAYANA COLLEGE ALATHUR

DEPARTMENT OF ENGLISH

ACTION PLAN 2021 – 2022

Sl No	Month	Name of Event
1.	June	Department Meeting
		Tutorial Meeting
		World Environment day Celebration
		Reading Day Celebration
2	July	Department Meeting
		Tutorial Meeting
		Class PTA Meeting for III Sem and V Sem UG
		PLUVIA 2021-2022
		Debate
3	August	Department Meeting
		Gender Sensitization Programme I
		Talk Series I
		Quiz
		Internal Examinations for II Sem UG and PG
4	September	Department Meeting
		Coping with Stress - Mental Wellness Programme
		Theatre Workshop
5	October	Department Meeting
		Tutorial Meeting
		Quiz
		Internal Examinations for V Sem UG
		Talk Series II
6	November	Department Meeting
		Tutorial Meeting
		Drama Fest
		Film Screening
		Talk Series III



R. Binu

Principal

Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

7	December	Department Meeting
		Tutorial Meeting
		Literary Fest
		Cultural Programmes
		Class PTA Meeting for UG and PG
		Internal Examinations for III Sem PG
8	January	Department Meeting
		Tutorial Meeting
		Paper Presentation by PG Students
		Gender Sensitization Programme II
9	February	Internal Examinations for I Sem UG and PG
		Department Meeting
		Tutorial Meeting
		Talk Series IV
		Open Forum
		Internal Exam for VI Sem UG
		Class PTA Meeting for UG and PG
10	March	Department Meeting
		Tutorial Meeting
		Women's Day Celebration
		Talk Series V
		Personality Effectiveness Programme



P. Binu

Prin.

Sree Narayana College,
Palakkad- 678 682, Kerala

ACTION PLAN 2021-22

Sl No.	Month	Name of Event
1	June	World environment day
3.	July	Final year & Second year PTA Meeting Celebration of different days in the month- mango day, doctors day cc.
4	August	Certificate of Onsm
5	November	Seminar on Botanist and Botany
6	Novermber	Bridge course & Orientation course for Students
7	December	Webinar on chemotaxonomy
9	January	Bridge course
11	February	I year PTA and celebration of world wetaland day
11	March	Science Day – Womens in Science
12	March	Poster making competition on the topic – Plant Health, Protecting Plants, Protecting Life


Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala



SREE NARAYANA COLLEGE, ALATHUR

PG DEPARTMENT OF ZOOLOGY

ACTION PLAN OF DEPARTMENT ACTIVITIES 2021-2022

SL.NO.	PROPOSED ACTIVITY	PROPOSED MONTH
1	Webinar in connection with Environment Day.	JUNE
2	Collecting and preserving insects in Connection with Insect week	JUNE
3	Awareness programme for conserving our Environment.	JULY
4	Quiz competition for students in connection with world conservation Day	JULY
5	Orientation programme	AUGUST
6	'Poster making' competition	SEPTEMBER
7	Parents Teachers meeting	OCTOBER
8	Webinar in connection with Blood Donors day	NOVEMBER
9	Field visit	DECEMBER
10	Carrier Guidance programme	JANUARY
11	Internal examination	FEBRUARY

R. Binu

Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

SREE NARAYANA COLLEGE ALATHUR

DEPARTMENT OF MICROBIOLOGY

ACTION PLAN 2021-2022

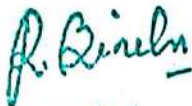
Sl .No	MONTH	ACTIVITIES	OUTCOME	REMARKS
1	September	Bridge Course	Helps to improve understanding towards Computer Application, Microbiology, Biochemistry	
2	October	Remedial Coaching	Help to overcome the learning difficulties and to Improve the performance of students	
3	December	World Aids Day-Posters	Awareness on AIDS	
4	December	PTA Meeting	Helps to discuss about the academic performance of the students, their improvisation, attendance, practical examinations, discipline etc.,	
5	December	Short Term Course On HACCP Level 2&3	Awareness on Food Safety and Analytical Microbiology	
6	February	World Hand Wash Day	Awareness among the children about the importance of Hand washing and Hygiene	
7	March	Alumni Meeting	Interaction among old students and awareness for junior students	
8	March	Association Day	To increase scientific temper among students	
9	March	Socio Institutional Responsibility Water Quality analysis	Awareness were given to Public to drink boiled water, filter water, or chlorinated water	


Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

DEPARTMENT OF CHEMISTRY
SREE NARAYANA COLLEGE, ALATHUR

ACTION PLAN for 2021-22

- Encourage faculties and students to participate in subject related seminars
- Encourage faculties and students to apply for research oriented projects and science related proposal/ activities
- Conduct seminar/webinar on recent developments in chemistry
- Conduct a awareness program to first year students about CUCSS scheme of BSc Chemistry Degree Programm
- Conduct awareness program about opportunities and Challenges in Chemistry
- PTA Meeting
- Hand on training to soil and water analysis
- Internal exam on each module after completion of portion.


Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala


Head of the Department

SREE NARAYANA COLLEGE, ALATHUR.
DEPARTMENT OF ECONOMICS

ACTION PLAN 2021-22

THE ACTION PLAN OF THE DEPARTMENT OF ECONOMICS DURING 2021-22 IS LISTED AS FOLLOWS.

1. Organize bridge class for the first year students after admission. (August)
2. Departmental quiz competition in connection with Independence Day (August)
3. World tourism day "COVID 19 IMPACT ON TOURISM SECTOR(SEPTEMBER)
4. Organize remedial classes on the basis of internal exam (October)
5. Constitution day-quiz competition (November)
6. Human rights Day Webinar(December-10)
7. International Womens day (March)
8. Voters day in Association with Electoral Literacy club(March)
9. Economics Association day (March)
10. Economics Alumni meeting (April)



A. Binu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

Department of Environment and Water Management

Action Plan for the Year 2021-2022

Sl. No	ACTIVITY	AIM/ OBJECTIVES	TIME DURATION/ TENTATIVE DATES
1	Project on potability of Water in Thennilapuram, kavaserry panchayath	To Analysis the E.Coli content in Well Water and Bore wells	3 DAYS
2	Training programme on conversion of waste materials for to valuable products	To Create awareness on waste management among students.	1 Day
3	Medicinal Plant Garden	To spread the Importance of herbal medicine.	1 week
4	Workshop on solid waste management	To spread the awareness about Proper disposal of Solid waste	1 Day
5	Industrial Visit	Industrial Training	1 Day
6	Observance World Environment Day	To Create awareness about Environmental protection	1 Day (June 5)
8	Observance World Ozone day	To spread awareness on protection of ozone layers and the earth	1 Day (September 16)
9	One Day Seminar on World Wetland day	To stress the Impotance of wetlands in ecosystem	1 Day(February 2)
11	Observance World Water day	To Give awareness on Importance and usage of water	1 Day (March 22)
12	Observance World Wildlife Day	To give awareness about Protection of wild life	1 Day (March 3)



A. Binu
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

SREE NARAYANA COLLEGE, ALATHUR

ACADEMIC CALENDER 2021-22

	I Semester UG	II Semester UG	III Semester UG	IV Semester UG	V Semester UG	VI Semester UG	I Semester PG	II Semester PG	III Semester PG	IV Semester PG
Admission	As Per University Notifications									
Date of Commencement of Semester as per University Calender	30/09/2021	21/02/2022	01/09/2021	17/01/2022	01/06/2021	01/11/2021	25/11/2021	31/03/2022	01/09/2021	20/01/2022
Date of I Internal Exams	02-11-2021 to 12-11-2021	20-04-2022 to 29-04-2022	20-10-2021 to 29-10-2021	17-03-2022 to 25-03-2022	21-07-2021 to 30-07-2021	15-12-2021 to 21-12-2021	12-01-2022 to 20-01-2022	22-06-2022 to 30-06-2022	27-10-2021 to 05-11-2021	07-03-2022 to 17-03-2022
Date of II Internal Exams	17-01-2022 to 28-01-2022	07-06-2022 to 17-06-2022	09-12-2021 to 21-12-2021	16-05-2022 to 25-05-2022	16-10-2021 to 23-10-2021	09-03-2022 to 17-03-2022	21-02-2022 to 28-02-2022	09-08-2022 to 17-08-2022	03-01-2022 to 13-01-2022	14-06-2022 to 21-06-2022
Date of Publishing Internal Marks	14/02/2022	28/06/2022	12/01/2022	30/05/2022	27/10/2021	25/03/2022	04/03/2022	23/08/2022	17/01/2022	28/06/2022
Date of End of Semester as per University Calender	17/02/2022	30/06/2022	14/01/2022	31/05/2022	29/10/2021	31/03/2022	30/03/2022	26/08/2022	18/01/2022	30/06/2022
Date of Semster Examination as per University Calender	16/03/2022	19/07/2022	23/02/2022	30/06/2022	07/02/2022	28/03/2022	07/03/2022	14/09/2022	03/03/2022	13/07/2022


 Principal
 Sree Narayana College, Alathur
 Palakkad- 678 682, Kerala

Sree Narayana College, Alathur

College TimeTable (Academic Year 2021-2022)

Monday						
Hours		I	II	III	IV	V
IDC	Economics	HISTORY	HISTORY	ENG	ENG	LANG
IDC	English	CORE	CORE	ENG	ENG	LANG
IDC	Mathematics	CORE	ENG	ENG	STAT	LANG
IDC	Botany	ZOO-SUB	ENG	ENG	CHEMSUB	LANG
IDC	Zoology	BOT-SUB	ENG	ENG	CHEMSUB	LANG
IDC	EWM	BOT-SUB	LAG	ENG	CHEMSUB	BOTCORE
IDC	Microbiology	CORE	LAG	ENG	BIOSTAT-THEORY	
IDC	Commerce	CORE	CORE	ENG	LAN	CORE
IDC	Chemistry	CORE	ENG	ENG	MATHS	LANG

Monday						
Hours		I	II	III	IV	V
I IDC	Economics	STAT	ENG	LANG	ECO	ECO
I IDC	English	CORE	ENG	LANG	CORE	CORE
I IDC	Mathematics	PHYSICS	ENG	LANG	CORE	STAT
I IDC	Botany	CHEM-SUB	ENG	LANG	ZOO-SUB	CORE
I IDC	Zoology	CHEM-SUB	ENG	LANG	ZOO-PRACTICALS	
I IDC	EWM	CHEM-SUB	GEN-PHY	GEN-ZOO	BOT-PRACTICALS	
I IDC	Microbiology	SUB-CA	CORE	CORE	BIO-CHEM-PRACTICAL	
I IDC	Commerce	CORE	CORE	CORE	CORE	CORE
II DC	Chemistry	PHYSICS	ENG	LANG	CHE-CORE PRACTICAL	CHE-CORE PRACTICAL

Monday						
Hours		I	II	III	IV	V
II DC	Economics	ECO-	ECO	ECO	ECO	ECO
II DC	English	CORE	CORE	CORE	CORE	CORE
II DC	Mathematics	CORE	CORE	CORE	CORE	CORE
II DC	Botany	CORE-KP	CORE-SJ	CORE-SJ	CORE-PRACTICAL-SJ	
II DC	Zoology	CORE	CORE	CORE	CORE	CORE
II DC	EWM	CORE-PHY	CORECHE-P	CORE-CHE-P	CORE-BOT	CORE-CHE
II DC	Microbiology	CORE	CORE PRACTICALS	CORE PRACTICALS	CORE	CORE
II DC	Commerce	CORE	CORE	CORE	CORE	CORE
III DC	Chemistry					

R. Binu
Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

Hours		Tuesday				
		I	II	III	IV	V
IDC	Economics	ECO	ECO	ECO	LANG	ENG
IDC	English	CORE	CORE	CORE	LANG	ENG
IDC	Mathematics	CORE	STAT	PHYSICS	LANG	ENG
IDC	Botany	BOT-PRACTICALS		ZOO-SUB	LANG	ENG
IDC	Zoology	ZOO-PRACTICALS		BOTSUB	LANG	ENG
IDC	EWM	ENG	CORE-BOT	BOTSUB	ENG	LANG
IDC	Microbiology	ENG	BIO-CHEM PRACTICAL	BIO-CHEM PRACTICAL	ENG	LANG
IDC	Commerce	ENG	CORE	LANG	ENG	CORE
I DC	Chemistry	CORE-PRACTICAL	CORE-PRACTICAL	PHYSICS	LANG	ENG

Hours		Tuesday				
		I	II	III	IV	V
I IDC	Economics	LANG	POLITICS	STAT	ENG	POLITICS
I IDC	English	LANG	CORE	CORE	ENG	CORE
I IDC	Mathematics	LANG	CORE	ENG	STAT	PHYSICS
I IDC	Botany	LANG	CHEM-SUB	ENG	CHEM-SUB-PRACTICAL	
I IDC	Zoology	LANG	CHEM-SUB	ENG	BOT-SUB-PRACTICAL	
I IDC	EWM	GEN-PHY	CHEM-SUB	GEN-ZOO	GEN-PHY	CORE-CHE
I IDC	Microbiology	CORE PRACTICAL	CORE PRACTICAL	CORE PRACTICAL	CORE	BIOCHEM
I IDC	Commerce	CORE	CORE	CORE	CORE	CORE
II DC	Chemistry	LANG	MATHEMATIC S	ENG	MATHEMATIC S	PHYSICS

Hours		Tuesday				
		I	II	III	IV	V
II DC	Economics	CORE	CORE	OPENCOURSE	CORE	CORE
II DC	English	CORE	CORE	OPENCOURSE	CORE	CORE
II DC	Mathematics	CORE	CORE	OPENCOURSE	CORE	CORE
II DC	Botany	CORE	CORE	OPENCOURSE	CORE/PRACTICALS	
II DC	Zoology	CORE-A	CORE-W	OPEN COURSE	CORE-PRACTICALSW/N	
II DC	EWM	CORE-BOT	CORE-EWM	OPENCOURSE	CORE-EWM	CORE-PHY
II DC	Microbiology	CORE	CORE	OPENCOURSE	CORE-PRACTICAL	
II DC	Commerce	CORE	CORE	OPEN COURSE	CORE	CORE
III DC	Chemistry					

Wednesday						
Hours		I	II	III	IV	V
IDC	Economics	ENG	HISTORY	ENG	HISTORY	ECO
IDC	English	ENG	CORE	ENG	CORE	CORE
IDC	Mathematics	ENG	STAT	ENG	PHYSICS PRACTICAL	PHYSICS PRACTICAL
DC	Botany	ENG	CORE-HD	ENG	ZOO-SUB-PRACTICALS	
IDC	Zoology	ENG	CORE-A	ENG	CHEMSUB-PRACTICAL	
IDC	EWM	ENG	ENG	LANG	BOT-SUBPRACTICAL	
IDC	Microbiology	ENG	ENG	LANG	SUB-CA	BIOCHEM
IDC	Commerce	ENG	ENG	CORE	CORE	LANG
I DC	Chemistry	ENG	MATHEMATIC S	ENG	MATHEMATIC S	CORE

Wednesday						
Hours		I	II	III	IV	V
I IDC	Economics	POLITICS	LANG	POLITICS	STAT	ENG
I IDC	English	CORE	LANG	CORE	CORE	ENG
I IDC	Mathematics	STAT	LANG	CORE	ENG	ENG
I IDC	Botany	ZOO-SUB	LANG	CORE	ENG	ENG
I IDC	Zoology	BOTSUB	LANG	CORE	ENG	ENG
I IDC	EWM	BOTSUB	CORE-CHE-PRACTICAL	CORE-CHE	GEN-PHY	
I IDC	Microbiology	CA-PRACTICALS		CORE	CORE	CORE
I IDC	Commerce	CORE	CORE	CORE	CORE	CORE
I IDC	Chemistry	MATHEMATICS	LANG	CORE	ENG	ENG

Wednesday						
Hours		I	II	III	IV	V
II IDC	Economics	ECO-	ECO	ECO	ECO	ECO
II IDC	English	CORE	CORE	CORE	CORE	CORE
II IDC	Mathematics	CORE	CORE	CORE	CORE	CORE
II IDC	Botany	CORE	CORE-PRACTICAL		CORE	CORE
II IDC	Zoology	CORE-PRACTICAL		CORE	CORE	CORE
II IDC	EWM	CORE-PHY	CORE-BOT	CORE-EWM	CORE-EWM	CORE-BOT
II IDC	Microbiology	CORE	CORE	CORE	CORE-PRACTICAL	CORE-PRACTICALS
II IDC	Commerce	CORE	CORE	CORE	CORE	CORE
II IDC	Chemistry					

Thursday						
Hours		I	II	III	IV	V
IDC	Economics	ECO	ECO	LANG	ENG	ENG
IDC	English	CORE	CORE	LANG	ENG	ENG
IDC	Mathematics	CORE	STAT	LANG	ENG	ENG
IDC	Botany	CHEM-SUB-PRACTICALS	CHEM-SUB-PRACTICALS	LANG	ENG	ENG
IDC	Zoology	BOT-SUB PRACTICAL	BOT-SUB PRACTICAL	LANG	ENG	ENG
IDC	EWM	LANG	ENG	ENG	CHEM-SUB-PRACTICALS	CHEM-SUB-PRACTICALS
IDC	Microbiology	LANG	ENG	ENG	BIO-CHE	CORE
IDC	Commerce	CORE	ENG	ENG	LANG	CORE
I DC	Chemistry	PHY-PRACTICAL	PHY-PRACTICAL	LANG	ENG	ENG

Thursday						
Hours		I	II	III	IV	V
I IDC	Economics	POLITICS	LANG	ENG	STAT	POLITICS
I IDC	English	CORE	LANG	ENG	CORE	CORE
I IDC	Mathematics	ENG	LANG	PHYSICS	STAT	CORE
I IDC	Botany	ENG	LANG	CHE-SUB	ZOO-SUBPRACTICALS	
I IDC	Zoology	ENG	LANG	CHE-SUB	CORE	BOT-SUB
I IDC	EWM	GEN-ZOO	GEN-ZOO	CHE-SUB	GEN-PHY	BOT-SUB
I IDC	Microbiology	BIOSTAT	CORE	BIOCHEM	CORE	CORE
I IDC	Commerce	CORE	CORE	CORE	CORE	CORE
II DC	Chemistry	ENG	LANG	PHYSICS	PHY-PRACTICAL	PHY-PRACTICAL

Thursday						
Hours		I	II	III	IV	V
II IDC	Economics	ECO	ECO	ECO	ECO	OPEN COURSE
II IDC	English	CORE	CORE	CORE	CORE	OPEN COURSE
II IDC	Mathematics	CORE	CORE	CORE	CORE	OPEN COURSE
II IDC	Botany	CORE-	COREPR ACTICAL- SJ/SA	CORE	CORE	OPEN COURSE
II IDC	Zoology	PRACTICALS-	CORE	CORE	CORE	OPEN COURSE
II IDC	EWM	CORE-EWM- PRJT	CORE-EWM	CORE-EWM	CORE-EWM	OPEN COURSE
II IDC	Microbiology	CORE PRACTICALS	CORE- PRACTICALS	CORE	CORE	OPEN COURSE
II IDC	Commerce	CORE	CORE	CORE	CORE	OPEN COURSE
III DC	Chemistry					

Friday						
Hours		I	II	III	IV	V
IDC	Economics	HISTORY	ENG	HISTORY	LANG	ENG
IDC	English	CORE	ENG	CORE	LANG	ENG
IDC	Mathematics	CORE	ENG	PHYSICS	LANG	ENG
IDC	Botany	CHE-SUB	ENG	CORE-SJ	LANG	ENG
IDC	Zoology	CHE-SUB	ENG	CORE-	LANG	ENG
IDC	EWM	CHE-SUB	ENG	CORE-BOT PRACTICAL	ENG	LANG
IDC	Microbiology	CORE	ENG	BIOSTAT	ENG	LANG
IDC	Commerce	LANG	ENG	CORE	ENG	CORE
IDC	Chemistry	MATHEMATICS	ENG	PHYSICS	LANG	ENG

Friday						
Hours		I	II	III	IV	V
I IDC	Economics	STAT	ECO	LANG	ENG	ECO
I IDC	English	CORE	CORE	LANG	ENG	CORE
I IDC	Mathematics	CORE	STAT	LANG	PHYSICS PRACTICAL	PHYSICS PRACTICAL
I IDC	Botany	ZOO-SUB	CORE-	LANG	CORE-PRACTICAL	
I IDC	Zoology	BOT-SUB	CORE	LANG	CHE-SUB-PRACTICALS	
I IDC	EWM	BOT-SUB	CHE-SUB-PRACTICALS		GEN-ZOO	CORE-CHE
I IDC	Microbiology	CORE	CORE	BIOCHEM	CORE	SUB -CA
I IDC	Commerce	CORE	CORE	CORE	CORE	CORE
II DC	Chemistry	MATHEMATICS	CORE	LANG	CORE	MATHEMATICS

Friday						
Hours		I	II	III	IV	V
II DC	Economics	ECO	ECO	ECO	ECO	ECO
II DC	English	CORE	CORE	OPENCOURSE	CORE	CORE
II DC	Mathematics	CORE	CORE	OPENCOURSE	CORE	CORE
II DC	Botany	CORE	CORE-SJ	OPENCOURSE	CORE-SJ	CORE
II DC	Zoology	CORE	CORE	OPENCOURSE	CORE-PRACTICALS	
II DC	EWM	CORE-BOT-PRACTICAL		OPENCOURSE	CORE-EWM-PRJT	
II DC	Microbiology	CORE	CORE	OPENCOURSE	PROJECT	PROJECT
II DC	Commerce	CORE	CORE	OPENCOURSE	CORE	CORE
III DC	Chemistry					

R. Binu
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala.



UNIVERSITY OF CALICUT

Abstract

General & Academic - Board of Studies- Reconstitution of Boards of Studies under various Faculties -Approved - Orders issued

G & A - I - F

U.O.No. 1781/2020/Admn

Dated, Calicut University.P.O, 11.02.2020

- Read:-1. U.O No 14072/2019/Admn dated 04.10.2019
2. Item No 2019.1426* of the Minutes of the meeting of the Syndicate held on 30.12.2019
3. U.O No 477/2019/Admn dt 14.01.2020
4. Panel of Members dated 03.02.2020 approved by VC received from the Vice Chancellor's Office

ORDER

As per the paper read as (1) above, a Sub-Committee was constituted to study the matter of reconstitution of the term expired Boards of Studies under various Faculties based on the decision of the Syndicate held on 19.09.2019. The Sub-Committee of the Syndicate at its meeting held on 28.12.2019 discussed the matter and decided to submit a draft proposal for reconstitution of various Boards of Studies before the Syndicate at its next meeting. The Syndicate at its meeting held on 30.12.2019, arising out of discussion, resolved to authorise the Vice-Chancellor to initiate action to reconstitute the Boards of Studies of all subjects for both U.G & P.G Programmes vide paper read as (2) and the Syndicate decision was implemented vide University Order read as (3).

The Vice-Chancellor, vide paper read as (4) above, has approved the panel of members of various Boards of Studies and also nominated the Chairpersons for each Board in accordance with Statute 26 of Chapter 3 of the Calicut University First Statutes 1976 and ordered to report the matter to the next Syndicate .

Orders are therefore issued reconstituting the Boards of Studies as per the list appended.

The Chairperson of the UG Board of Studies will be the ex-officio member of the P.G Board of Studies in the same subject and vice-versa and the Chairpersons of the Boards of Studies shall be ex-officio members of the various Faculties concerned. The members of the Boards of Studies shall hold office for a period of three years with effect from the date of this order.


Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

Biju George K

Assistant Registrar

To

- 1) The Chairpersons and Members of the Boards of Studies 2) Deans of various Faculties
Copy to : PS to VC/ PA to Registrar/PA to FO/ PA to CE/ Director SDE/ CDC/ DoR/ DoA/
IQAC/DR-GA IV/DR-GA-II/ DR-PID/Finance/ Digital Wing/SF/DF/FC

Forwarded / By Order

Section Officer

5	Dr. Muhammed Noufal.	Assistant Professor, Department of commerce, Govt. College, Kunnamangalam.	9946050099
6	Dr. Jyothi Lakshmi.	Assistant Professor Department of commerce, SN College, Alathur Palakkad	9746059393
7	Shobha.	Assistant Professor Department of commerce, St. Joseph College, Devagiri, Kozhikode.	
8	Jesitha. J	Assistant Professor Department of commerce, NSS College Nenmara.	9846556544, jesijsankar@gmail.com
9	Pramod. P	Assistant Professor Department of commerce, SKVC, Thrissur.	
10	Dr. Joobi VP	Assistant Professor Department of commerce, SNG College Chelannur, Kozhikode.	9605484514

2. COMMERCE (PG)

Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Dr.M.A.Joseph (Chairperson)	Professor, Dept. of Commerce and Management Studies, University of Calicut	9447123637 8606032741 jsphma@gmail.com jsph_ma@yahoo.co.in
2	Dr. B. Johnson	Professor, Dept. of Commerce and Management Studies, University of Calicut	9446182862 7034390249 Johnsonb_9@yahoo.co.in nsavier01@gmail.com
3	Dr. Rasia Begam	Professor and Head Department of Commerce, University of Kerala, Kariavattam Post. Thiruvananthapuram	drresia@gmail.com 8547292598
4	Dr. Rajithakumar	Professor, School of Management Studies Cochin University of Science and Technology Kochi-682022	rajithakumar@cusat.ac.in 9400019611

R. Birubn
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

2	RajkumarSV	Asst. Professor of Commerce SCAM Govt College kuttanallur, Thrissur	9349191936,svrajkumar25@gmail.com
3	Anila Balan	Assistant Professor, Department of Commerce, SN Alathur	9048881718 anila.commerce@gmail.com
4	Aswathy	Asst. professor of Commerce Govt College, Chittur, Palakkad.	9744993110
5	Dr. M.A. Joseph	Professor, Dept. of Commerce and Management Studies, University of Calicut	9447123637 8606032741 jsphma@gmail.comjsph_ma@yahoo.co.in
6	Dr.M. Bhasi	Professor School of Management Studies Cochin University of Science and Technology Kochi-682022	mbhasi@cusat.ac.in 0484-2575096 9447419863
7	Dr.K.S.Chandrasekhar	Professor & Director School of Management and Legal Studies University of Kerala, Kariyavattam Trivandrum-695 581 Kerala	9447268840 kscnair@gmail.com kscnair@hotmail.com
8	Dr. Biju M. K.,	Assistant Professor, School of Management and Business Studies, Mahatma Gandhi University, Priyadarshini Hills, Kottayam- 686 560	9447104488 bijumk@rediffmail.com
9	Shri. Karthikeyan P	Assistant Professor, Department of Management Studies Thalassery Campus ,Kannur University Palayad - 670661	9946964042 karthikeyanp@kannuruniv.ac.in
10	Dr PN Harikuamr	Associate Professor, Catholocate College, Pathanamthitta	9447304912
6. Management Studies (UG)			
Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Dr Shaji Maramveetil (Chairperson)	Associate Professor, Department of Commerce, R.S.M. SNDP Yogam College, Koyilandy (P.O) Kozhikode 673305	9447384253, shajimveetil@gmail.com

10	Uma Govind	Associate professor ,Dept.of English,S.N.College,Alathur	ugsasikumar@tahoo.co.in 9447890583
7. English (UG)			
Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Dr. Pradeepkumar K (Chairperson)	Asst Professor, Dept of English, Sri Vyasa N S S College, Vyasagiri, Wadakkancery, Thrissur PIN 680623	9447185537; 8136934770 pradeepkorapath@gamail.com
2	Siniya Tom Kenady	Asst. Professor of English Govt arts and science College Ollur	9497337250, seeniajoy@gmail.com
3	Dr. Raheena K.K.	Asst. Professor of English, Govt. College Mankada, Malappuram	9447382506 raheenakk90@gmail.com
4	Dr. Basheer V.P.	Asst. Professor of English, Govt. Arts & Science College Kunnamangalam	basheervp.veluthaparambat h@gmail.com
5	Dr. Sreepriya	Asst. Professor of English Govt. Victoria College, Palakkad	9496294138.sreebala.priya @gmail.com
6	Ramachandran K.	Asst. Professor, Dept of English, St. Mary's College, S.Bathery	9847774394, ramsmcsby2@gmail.com
7	Dr. Sajitha M A.	Assistant Professor, Department of English, Farook College, calicut	9495633149 sajitharazak@farookcollege. ac.in
8	Dr Muraleekrishnan.T	Associate Professor,M.E.S.Asmabi College ,Vemballur	mesmurali@gmail.com
9	Roy P.P	Asst.Professor ,EMEA College ,Kondotty	9847453870, royppmlp@gmail.com
10	Sreeja .G	Associate Professor,Dept of English,NSS College ,Nenmara.	sreemanom@gmail.com812 9402075
8. European Languages (Single Board)			
Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Dr. Gajanan (Chairperson)	Professor & HOD Department of Russian, Mysore University.	812419342, ajigajanan@dataone.in
2	Justin K Sebastian	Asst. Professor, Dept. of German, Govt. Women's college Vazhuthakkad, Trivandrum 6595014	9496818726, justin2007stc@gmail.com
3	Dr. Krishnakumar RS	Assistant Professor, Dept. of Russian University of Kerala	9497270802, kkmeerkk@gmail.com

12. Electronics (Single Board)			
Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Dr. Sreelekha G. (Chairperson)	Asst. Professor of Electronics, Govt. College Tanur	9447032792 sreelekhasatheesh@gmail.com
2	Dr. Sarin	Asst. Professor of Electronics, Govt. College Chittur, Palakkad	7561805443, sarincrema@gmail.com
3	Dr. Nibert Thomas	Asso. Professor, Dept. of Electronics, WMO College, Muttill	9447640770 nibert.pallath@gmail.com
4	Dr. Jibish Mathew	Asst. Professor, Electronics, Prajyoti Niketan College, Pudukkad, Thrissur 680 301.	94479 14252 jibishm@gmail.com
5	Kishan kumar	Asst. Professor, Marthoma College, Chungathara.	9048333591
6	Dr. Job Sabu	Asst. Professor, MES Kalladi College, Mannarkad	8547036454
7	Dr. Daughy John	Asst. Professor, MAMO College, Mukkam	9539338646 daughyjohn@gmail.com
8	Dr. A.K Anila	Asst. Professor, S.N College, Alathur	
9	Dr. Ashkarali	Asst. Professor of Electronics, Govt. College Tanur	
10	Dhanraj PV	Assistant Professor, Department of Physics, Malabar Christian College, Calicut	
13. Environmental Science & Water Management (Single Board)			
Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Dr. C.C. Harilal (Chairperson)	Assistant Professor Dept of Botany, University of Calicut	9447956226 drharilal@yahoo.com
2	Dr. Sabu Joseph	Professor, Department of Environmental Sciences, University of Kerala, Kariavattom Thiruvananthapuram-695581	9447453063 jsabu2000@gmail.com
3	Dr. E.V. Ramasamy	Professor, School of Environmental Sciences, Mahatma Gandhi University, PD Hills PO, Kottayam – 686560	9447095935 evramasamy@gmail.com

2	Dr. P.R Jayasree	Joint Director of Research, St. Joseph's College, Irinjalakkuda, Thrissur, PIN-680121	9446157992 sreeanany@gmail.com
3	Dr. A V Raghu	Scientist, KFRI, Peechi – 680653 Thrissur, Kerala	9847903430 avraghu@kfri.res.in
4	Dr. Anu Augustine	Associate Professor, School of Life Sciences, Department of Biotechnology & Microbiology, Thalassery Campus, Palayad, Kannur District, PIN. 670661	9447151040 anuaugus@rediffmail.com
5	Dr. Shareena J	Asst. Professor. SN College, Alathur	
6	Dr. S. Jayasree	Assistant Professor of botany, Govt Arts & Science College, Caicut	9446888760.jayabotany12@gmail.com
7	Dr. Shanij.K	Assistant Professor of Zoology, Govt Arts & Science College, Caicut	9895860207.shanijkk@gmail.com
8	Sudheesh Kumar. T.K	Asst. Professor of Zoology, Govt. College, Madappali	9446322102, sudheeshkknair@gmail.com
9	Dr. Seema Devi	Assistant Professor, NSS College Manjeri, Caicut	8281241539, seemadevir@gmail.com
10	Dr. Binu R	Asst Pro of Zoology, Christ College, IJK, TSR	7025517105.ramanbinu@gmail.com

16. Geography (Single Board)

Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Suresh.P. (Chairperson)	Asst. Professor of Geography, Govt. College Chittur, Palakkad	9605050221, sureshgrid@gmail.com
2	Dr. Richard	Asst. Professor of Geography, Govt. College Chittur, Palakkad	8281045413, richardscaria0707@gmail.com
3	Dr. Jayarajan	Asst. Professor of Geography, Govt. College Chittur, Palakkad	9447357974.jayarajkk@gmail.com
4	Pankajakshan	Asst. Professor of Geography, Govt. College Chittur, Palakkad	9947713113, pankajchirayil@gmail.com
5	Dr. Balasubramani	Asst. Professor of Geography, Central University of Tamilnadu, Thiruvarur	9944060319.geobala@gmail.com
6	Prasad	Asst. Professor of Geography, Govt. College Chittur, Palakkad	9446265848.prasadngeo@gmail.com
7	Roobina A	Asst. Professor of Geography, Govt. College Chittur, Palakkad	8848312537.roobinageo@gmail.com

9	Dr. Sreelatha M N	Associate Professor, Department of Mathematics, NSS College Manjeri	9495203084,sreelathamana@gmail.com
10	Devadas	Associate Professor, Department of Mathematics, SN College Alathur	9605723871v.devadas.v@gmail.com
24. Micro Biology (Single Board)			
Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Dr. Denoj Sebastian (Chairperson)	Assistant Professor Dept of Life Sciences, University of Calicut	974444361 drds@uoc.ac.in
2	Dr. Vineetha Mohan	Assistant Professor, Department of Microbiology, Govt. College, Kozhijampara	9895976276 vineethamohan1@gmail.com
3	Dr. Reshma C.V	Assistant Professor, Department of Microbiology, Govt. College, Kozhijampara	9895328360 reshmavalsalan@gmail.com
4	Dr. Diva R	Assistant Professor, Department of Microbiology, SN College, Alathur	919745745499
5	Abdul Bari. KK	Assistant Professor, Department of Microbiology, Pazhassiraja College, Pulpally	9447785210 pazhassibari@gmail.com
6	Nithya Jayan	Assistant Professor, Department of Microbiology, SN College, Alathur	9744760993 nit_foryou@rediffmail.com
7	Dr. Sarala Gopalakrishnan	Associate Professor, Department of Microbiology, St. Pius X College, Rajapuram, Kasargod Kannur University	944-713-4111 saralkrishn@gmail.com
8	Dr. Baiju G Nair	Assistant Professor School of Biotechnology, National Institute of Technology, NIT P.O., Calicut	70340 11575 bgnair06@gmail.com
9	Dr. Radhakrishnan E.K	Assistant Professor, School of Biosciences, M.G. University	9847901149 radhakrishnanek@mgu.ac.in
10	Dr. Sinosh Skariyachan	Assistant Professor Department of Microbiology, St. Pius X College, Rajapuram, Kasargod Kannur University	9739654015 sinoshskariya@gmail.com

R. Binu

Principal
Sree Narayana College, Alathur
Palakkad-678 682. Kerala

10	Uma Govind	Associate professor ,Dept.of English,S.N.College,Alathur	ugsasikumar@tahoo.co.in 9447890583
----	------------	--	---------------------------------------

7. English (UG)

Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Dr. Pradeepkumar K (Chairperson)	Asst Professor, Dept of English, Sri Vyasa N S S College, Vyasagiri, Wadakkancery, Thrissur PIN 680623	9447185537; 8136934770 pradeepkorapath@gamail.com
2	Siniya Tom Kenady	Asst. Professor of English Govt arts and science College Ollur	9497337250, seeniajoy@gmail.com
3	Dr. Raheena K.K.	Asst. Professor of English, Govt. College Mankada, Malappuram	9447382506 raheenakk90@gmail.com
4	Dr. Basheer V.P.	Asst. Professor of English, Govt. Arts & Science College Kunnangalam	basheervp.veluthaparambath@gmail.com
5	Dr. Sreepriya	Asst. Professor of English Govt. Victoria College, Palakkad	9496294138.sreebala.priya@gmail.com
6	Ramachandran K.	Asst. Professor, Dept of English, St. Mary's College, S.Bathery	9847774394, ramsmcsby2@gmail.com
7	Dr. Sajitha M A.	Assistant Professor, Department of English, Farook College, calicut	9495633149 sajitharazak@farookcollege.ac.in
8	Dr Muraleekrishnan.T	Associate Professor,M.E.S.Asmabi College ,Vemballur	mesmurali@gmail.com
9	Roy P.P	Asst.Professor ,EMEA College ,Kondotty	9847453870, royppmlp@gmail.com
10	Sreeja .G	Associate Professor,Dept of English,NSS College ,Nenmara.	sreemanom@gmail.com8129402075

8. European Languages (Single Board)

Sl. No	Name	Designation and Address	Phone No. and E-mail
1	Dr. Gajanan (Chairperson)	Professor & HOD Department of Russian, Mysore University.	812419342, ajigajanan@dataone.in
2	Justin K Sebastian	Asst. Professor, Dept. of German, Govt. Women's college Vazhuthakkad, Trivandrum 6595014	9496818726, justin2007stc@gmail.com
3	Dr. Krishnakumar RS	Assistant Professor, Dept. of Russian University of Kerala	9497270802, kkmeerkk@gmail.com

Sree Naryana College Alathur
Department of Mathematics
Time Table for 2021-22

DAY	CLASS	HOUR				
		I	II	III	IV	V
Monday	S1/S2	MS	KP	VS	RS	DDV
	S3/S4	DDV	RS	MS	KP	VS
	CS1/CS2	PK	ENG	ENG	STAT	LANG
	CS3/CS4	PHY	ENG	LANG	MS	STAT
	CS5/CS6	KP	VS	PK	DDV	RS
	CC1/CC2	CHEM	ENG	ENG	PK	LANG
	CC3/CC4	PHY	ENG	LANG	CHE PRA	CHE PRA
Tuesday	S1/S2	DDV	VS	RS	KP	MS
	S3/S4	RS	KP	MS	DDV	VS
	CS1/CS2	PK	STAT	PHY	LANG	ENG
	CS3/CS4	LANG	PK	ENG	STAT	PHY
	CS5/CS6	KP	DDV	PROJECT	RS	PK
	CC1/CC2	CHE PRA	CHE PRA	PHY	LANG	ENG
	CC3/CC4	LANG	MS	ENG	VS	PHY
Wednesday	S1/S2	VS	KP	MS	DDV	RS
	S3/S4	DDV	RS	VS	KP	MS
	CS1/CS2	ENG	STAT	ENG	PRACT	PRACT
	CS3/CS4	STAT	LANG	PK	ENG	ENG
	CS5/CS6	RS	DDV	KP	VS	PK
	CC1/CC2	ENG	PK	ENG	PK	CHE
	CC3/CC4	MS	LANG	CHE	ENG	ENG
Thursday	S1/S2	VS	DDV	RS	MS	KP
	S3/S4	MS	RS	KP	VS	DDV
	CS1/CS2	PK	STAT	LANG	ENG	ENG
	CS3/CS4	ENG	LANG	MS	STAT	PK
	CS5/CS6	DDV	KP	PK	PROJECT	RS
	CC1/CC2	PHY PRA	PHY PRA	LANG	ENG	ENG
	CC3/CC4	ENG	LANG	VS	PHY PRA	PHY PRA
Friday	S1/S2	KP	RS	MS	DDV	VS
	S3/S4	MS	VS	DDV	KP	RS
	CS1/CS2	DDV	ENG	PHY	LANG	ENG
	CS3/CS4	PHY	STAT	LANG	PRACT	PRACT
	CS5/CS6	VS	KP	PK	RS	DDV
	CC1/CC2	PK	ENG	PHY	LANG	ENG
	CC3/CC4	PHY	CHE	LANG	CHE	MS

DDV-Devadas V

KP-Krishnaprabha R

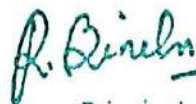
RS-Sucharitha RS

VS-Vaishnavi S

MS-Manjuraj S

PK- Premkrishnan C V

STAT - Binusha



Principal

Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

SREE NARAYANA COLLEGE ALATHUR
DEPARTMENT OF ENGLISH
TIME TABLE 01 JUNE 2021

	I	II	III	IV	V
MON	I FE X	I FE NV	I FE/ECO Y	I FE/ECO RR	III FE PL
	III FE NV	III FE DN	I M/C PL	III FE UG	I MA DN
	I MA PL	I M/C X	I Z/B X	I MA NV	
		I Z/B UG	I E/M/B DN		
		I MA RR	III FE RR		
		I MA UG			
TUE	I FE RR	I FE X	I FE UG	I E/M/B PL	I FE/ECO X
	III FE UG	III FE PL	III FE (OC) NV	III FE DN	I M/C DN
	I E/M/B X	I MA NV	I MA RR	I MA UG	I Z/B NV
	I MA DN				III FE RR
				I MA PL	
WED	I FE/ECO DN	I FE NV	I FE/ECO X	I FE PL	I FE DN
	I M/C UG	I E/M/B X	I M/C RR	III FE RR	III FE NV
	I Z/B X	III FE UG	I Z/B UG	I MA DN	I MA UG
	I E/M/B NV	I MA PL	III FE DN		
	III FE PL		I MA NV		
	I MA RR				
THU	I FE UG	I FE PL	I E/M/B X	I FE/ECO NV	I FE/ECO PL
	III FE DN	III FE RR	III FE UG	I M/C X	I M/C X
	I MA PL	I E/M/B X	I MA DN	I Z/B DN	I Z/B RR
		I MA NV		III FE PL	III FE (OC) NV
				I MA RR	I MA UG
FRI	I FE RR	I FE/ECO Y	I FE DN	I E/M/B X	I FE/ECO UG
	III FE NV	I M/C NV	III FE (OC) UG	III FE RR	I M/C X
	I MA UG	I Z/B X	I MA PL	I MA NV	I Z/B PL
		I E/M/B RR			III FE DN
		III FE PL			I MA RR
		I MA DN			

UG Uma Govind

NV Dr Nikhil V

RR Remya Rajan

PL Poornima P L

DN Dana Narayanan

X Post Vacant

Y Post Vacant



R. Binu
 Principal
 Sree Narayana College, Alathur
 Palakkad- 678 682, Kerala.

PROFORMA-II

Statement showing the allotment of workload among the teaching staff for the year 2021-2022 25.11.2021 onwards

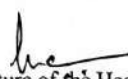
Name of the College : Sree Narayana College, Alathur

Name of the Department : English

Sl No	Name of Teacher	Designation	Lecture work					Supervision Translation Correction Practical	No of Books	Total
			UG			PG				
			I Year (I&II Sem)	II Year (III&IV Sem)	III Year (V&VI Sem)	I Year (I&II Sem)	II Year (III&IV Sem)			
1	Uma Govind	Associate Professor	2	1	3	5	5		16	
2	DrNikhil.V	Assistant Professor	1	2	3	5	5		16	
3	RemyaRajan E	Assistant Professor	1	2	3	5	5		16	
4	Poomima.P. L	Assistant Professor	1	2	3	5	5		16	
5	Dana Narayanan	Assistant Professor	1	2	3	5	5		16	
6	NivedaGokuldas	Guest Lecturer	5	8	3				16	
7	Divya M K	Guest Lecturer	7	7	2				16	
8	Anil K R	Guest Lecturer	9	4	3				16	
9	Jijesh K T	Guest Lecturer	14	1	1				16	
10	Kirthana T U	Guest Lecturer	7	1	1				9	
Total Hours			(Excluding PG Weightage)							153

Certified that I have personally verified the work-load details given above with rules therein force and found correct. I will be personally responsible for any discrepancy that may be found at a later time.


Principal
Sree Narayana College, Alathur
Palakkad, 678 602 Kerala


Signature of the Head of the Department:

(2021-2022)

M.Sc ZOOLOGY TIME TABLE & WORK LOAD

DAY	CLASS	9.30 to 10.25am	10.30 to 11.25am		11.35 to 12.30pm		1.30 to 2.30pm	2.30 to 3.30pm
MONDAY	I YR	AA	LR	11.25 -11.35am BREAK	SL	12.30 -1.30pm LUNCH BREAK	AA(P)	AA(P)
	II YR	SL (P)	SL (P)		AA		LR(P)	LR(P)
TUESDAY	I YR	SL	AA		LR		LR(P)	LR(P)
	II YR	LR	Project		SL		AA(P)	AA(P)
WEDNESDAY	I YR	SL	LR		AA		SL(P)	SL(P)
	II YR	AA	SL		LR		LR(P)	LR(P)
THURSDAY	I YR	AA	SL(P)		SL(P)		LR(P)	LR(P)
	II YR	SL	LR		AA		AA(P)	AA(P)
FRIDAY	I YR	LR	Library		SL		AA(P)	AA(P)
	II YR	SL	AA		LR		SL(P)	SL(P)


LR- Dr. Lalitha; SL- Sreelekha ; AA- Akshaya Ajoy

WORK LOAD

LR - 16 hrs/week (Theory – 8 hrs, Practical – 8 hrs)

SL - 16 hrs/week (Theory – 8 hrs, Practical – 8 hrs)

AA - 16 hrs/week (Theory – 8 hrs, Practical – 8 hrs)


Principal
Sree Narayana College, Alaihur
Palakkad- 678 682, Kerala

DEPT OF MICROBIOLOGY- TIME TABLE 2021-22 ODD SEMESTER

Day	Batch	I hr	II hr	III hr	IV hr	V hr
Monday	I	MB DR	Lang	Eng	Bio statistics	
	II	Comp	MB SD	MB DR	Biochem Practicals	
	III	MB SD	MB-NJ	MB SD	MB PRACT NJ+DR/NJ+SD	
Tuesday	I	Eng	Biochem practicals		Eng	Lang
	II	GMB Practicals SD+NJ/NJ+DR/SD+DR			MB SD	Biochem
	III	MB DR	MB SD	MB (open) NJ	MB PRACT NJ+DR/DR+SD	
Wednesday	I	Eng	Eng	lang	Comp	Biochem
	II	Biostat practicals NA		MB NJ	MB SD	MB NJ
	III	MB NJ	MB SD	MB DR	MB PRACT DR+NJ/SD+DR	
Thursday	I	Lang	Eng	Eng	Bioche	GMB NJ
	II	MB NJ	Biochem	MB DR	MB SD	BIOST
	III	MB DR	MB Practical DR+SD/ NJ+SD		MB DR	MB OPEN SD
Friday	I	GMB SD	Eng	Comp	Eng	Lang
	II	Biochem	MB DR	MB NJ	BIOSTAT	MB DR
	III	MB NJ	MB NJ	MB OPEN DR	Project SD	Project NJ

SD- Dr.S.Dhiva, DR- Divya.R, NJ – Nithya Jayan

R. Bineth

Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

DEPT OF MICROBIOLOGY - TIME TABLE 2021-22 EVEN SEMESTER

Day	Batch	I hr	II hr	III hr	IV hr	V hr
Monday	I	MB DR	Lang	Eng	Blo statistics	
	II	Comp	MB SD	MB DR	Biochem Practicals	
	III	MB SD	MB-NJ	MB SD	MB PRACT SD+DR/NJ+SD	
Tuesday	I	Eng	Biochem practicals		Eng	Lang
	II	GMB Practicals SD+NJ/NJ+DR/SD+DR			MB SD	Biochem
	III	MB DR	MB SD	MB NJ	MB PRACT NJ+DR/DR+SD	
Wednesday	I	Eng	Eng	lang	Comp	Biochem
	II	Biostat practicals NA		MB NJ	MB SD	MB NJ
	III	MB NJ	MB SD	MB DR	MB PRACT DR+NJ/SD+DR	
Thursday	I	Lang	Eng	Eng	Bioche	GMB NJ
	II	MB NJ	Biochem	MB DR	MB SD	BIOST
	III	MB DR	MB NJ	MB Practical NJ+SD/ DR+NJ		MB DR
Friday	I	GMB SD	Eng	Comp	Eng	Lang
	II	Biochem	MB DR	MB NJ	BIOSTAT	MB DR
	III	MB Practicals NJ +DR/NJ+SD/DR+SD			Project NJ	Project SD

SD- Dr.S.Dhiva, DR- Divya.R, NJ – Nithya Jayan

R. Binu
Principal
Sree Narayana College, Alattur
Palakkad-678 682, Kerala

PERFORMA-I

Statement of workload for the year 2021-22 based on the student strength as on 1/11/2021 (for courses)


1. Name of College : Sree Narayana College, Alathur
 2. Name of Department : Microbiology
 3. Principal's Subject : Botany

Sl. No	Name of Course	Main	Sub/Language/complementary	Actual strength of students as on 1/11/2021	Sanctioned strength of students excluding marginal increase if any	Lecture hours (subject wise)	Practical hours	Total hours of work load	No of sanctioned posts (Uty)	No of teachers permissible (UGC)	No of teachers working	Remarks
1	I Year	Microbiology	English/Hindi/Malayalam /Biochem/comp app	31	24	3	0	3	3	3	3	-
2	II Year	Microbiology	Biochem/biosta	45	24	12	3+3=6	18				
3.	III Year	Microbiology	-	31	24	19	8+8+3=19	38				
Total hours						34	25	59				

Certified that I have personally verified the work-load details given above with rules there in force and found correct. I will be personally responsible for any disciplinary that may be found a later time

Signature of the Head of the Department: 

PRINCIPAL



Principal
 Sree Narayana College, Alathur
 Palakkad-678 682, Kerala

PERFORMA-II

Statement showing the allotment of workload among the teaching staff for the year 2021-2022

Name of the College: Sree Narayana College, Alathur Name of the department : Microbiology

Sl No	Name of Teacher	Designation	Lecturer work					Supervision /Translation Correction/Practical/project			No of Books	Total
			UG			PG		I Year	II Year	III Year		
			I Year	II Year	III Year	I Year	II Year					
1.	Dr.S.Dhiva	Assistant Professor & Head	1	4	7	0	0	0	2	6		16 Hours
2.	Divya.R	Assistant Professor	1	4	6	0	0	0	2	7		16 Hours
3.	Nithya Jayan	Assistant Professor	1	4	6	0	0	0	2	6		16 Hours
								Balance hours				11 hrs
Total Hours			3	12	19			0	6	19		59 hrs
								Grand total				59hrs

Certified that I have personally verified the work-load details given above with rules there in force and found correct. I will be personally responsible for any disciplinary that may be found a later time

R. Binu
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

Signature of the Head of the Department:

S. D.

Department of Chemistry, S N College Alathur

Time Table Odd Sem 2021-2022

	I	II	III	IV	V
Monday	CS ₃ -A: RKM CS ₃ -B: GG2 MS ₁ :JKR	DS ₅ (P): RKM/GG1		CS ₁ -A: GG1 CS ₁ - B: GG2	DS ₅ EWM:GG1
				MS ₃ (P) :JKR(2)//RKM(2)	
Tuesday		CS ₃ - A: GG2 CS ₃ - B: JKR	DO ₅ (O): GG1		DS ₃ EWM: GG1
	MS ₁ (P) : RKM (2)/ JKR/GG1			CS ₃ Bot(P): RKM(2)/ JKR /GG2	
Wednesday			MS ₃ : RKM	DS ₃ EWM: JKR	MS ₁ :RKM
	DS ₃ EWM (P): JKR(2)			CS ₁ Zoo(P): GG1(2)/RKM/JKR	
Thursday	CS ₁ Bot(P): GG1 (2) / RKM		CS ₃ - A: JKR CS ₃ - B: RKM		DO ₅ (O): JKR
			CS ₁ EWM(P): GG1 (2)		
Friday	CS ₁ - A: GG2	MS ₃ :GG1	DO ₅ (O): RKM	MS ₃ :JKR	DS ₃ EWM: RKM
	CS ₁ - B :GG1	CS ₃ EWM(P): JKR(2)		CS ₃ Zoo(P): GG1(2)/GG2/JKR	

C: Complementary, M- Main, D: EWM, S₁: First Semester, S₃: Third Semester, S₅: Fifth Semester; P; Practical, A: Zoology and Botany B: EWM; RKM: Dr. Rajesh K. M, JKR; Jiju K R, GG1: Govt.Guest 1 Viswapriya K P, GG2: Govt.Gouest 2 Dasami P M

R. Binu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

Proforma 1

Statement of workload for the year 2021-22 based on the student strength as on ...11/11/2021.....(for degree and PG course)

1. Name of the College: Sree Narayana College, Alathur

2. Name of Department: Chemistry

3. Principal's Subject: Botany

Sl. No	Name of Course	Main	Sub/Language	Actual Strength of students as on	Sanctioned strength of students excluding marginal increase if any	Lecturer hours (subject wise)	Practical hours	Total hours of workload	No of sanctioned post(Uty)	No. of teachers permissible (UGC)	No of teacher working	Remarks
1	I year - Chemistry	Chemistry			24	2	2+2=4	6	2	4	6	4 post vacant. Will engage by government guest
2	I year - Zoology		Chemistry Complementary		24	2	2+2= 4	6				
3	I year - EWM		Chemistry Complementary		20	2	2	4				
4	I year - Botany		Chemistry Complementary		24		2+2= 4	4				
5	II year Chemistry	Chemistry			24	3	2+2= 4	7				
6	II year - Zoology		Chemistry Complementary		24	3	2+2= 4	7				
7	II year - EWM		Chemistry Complementary		20	3	2	5				
8	II year - Botany		Chemistry Complementary		24		2+2= 4	4				
9	II year- EWM	EWM Core			20	3	2	5				
10	III year- EWM	EWM Core			20	4	2	6				
11	III year Chemistry	Chemistry			24	15	20	35				
Total						37	52	89				

Signature of the Head of Department:




Principal
Sree Narayana College, Alathur
Palakkad- 678 632, Kerala

Sept 2021

P G DEPARTMENT OF COMMERCE
TIME TABLE FOR EVEN SEMESTERS OCTOBER 2021-22

	CLASS	I	II	III	IV	V
MON	S1 B.COM	AKM-BM	JL-ME	ENG	LAN	RKR-BM
	S3 B.COM	RKR-PBS	BUK-NS	STV-BL	JL-CA	SB-HRM
	S6 B.COM	SB-AUD	STV-TAX	BUK-ICM	RK-COP	AB-PRO
	S1 M.COM	RK-CG	SB-OB	AKM-BE	AB-QT	BUK-AMD
	S3 M.COM	AB-FMI	RKR-RM	JL-IM	AKM-IT	STV-FM
TUE	S1 B.COM	ENG	JL-ME	LAN	ENG	AKM-BM
	S3 B.COM	JL-CA	RKR-PBS	SB-HRM	RK-CA	BUK-NS
	S6 B.COM	RK-COP	SB-AUD	BUK-ICM	STV-TAX	STV-PRO.
	S1 M.COM	AKM-BE	AB-QT	RK-CG	BUK-AMD	SB-OB
	S3 M.COM	AB-FMI	STV-FM	AKM-IT	RKR-RM	JL-IM
WED	S1 B.COM	ENG	ENG	RKR-BM	JL-ME	LAN
	S3 B.COM	AB-BL	RK-CA	SB-HRM	BUK-NS	RKR-PBS
	S6 B.COM	BUK-ICM	STV-TAX	RK-COP	SB-AUD	JL-PRO
	S1 M.COM	SB-OB	AB-QT	BUK-AMD	AKM-BE	RK-CG
	S3 M.COM	JL-IM	RKR-RM	AKM-IT	AB-FMI	STV-FM
THU	S1 B.COM	AKM-BM	ENG	ENG	LAN	JL-ME
	S3 B.COM	AB-BL	RK-CA	SB-HRM	RKR-PBS	BUK-NS
	S6 B.COM	RK-COP	JL-AUD	RKR-ICM	STV-TAX	STV-TAX
	S1 M.COM	BUK-AMD	AKM-BE	AB-QT	RK-CG	SB-OB
	S3 M.COM	STV-FM	RKR-RM	JL-IM	AB-FMI	AKM-IT
FRI	S1 B.COM	LAN	ENG	JL-ME	ENG	AKM-BM
	S3 B.COM	RK-CA	STV-BL	BUK-BNS	SB-HRM	RKR-PBS
	S6 B.COM	SB-AUD	RK-COP	STV-TAX	RKR-ICM	BUK-PRO.
	S1 M.COM	AKM-BE	AB-QT	SB-OB	BUK-AMD	RK-CG
	S3 M.COM	JL-IM	RKR-RM	AKM-IT	STV-FM	AB-FMI



A. Binu

Sree Narayana College, Alathur
Palakkad-678 682, Kerala

PROFORMA-I

Statement of workload for the year 2021-2022as on 30-09-2021

1. Name of College : Sree Narayana College, Alathur, Palakkad.
 2. Name of Department : Commerce
 3. Principal's Subject : Botany

Sl. No	Name of Course	Main	Sub/Language	Actual strength of students as on 30/09/2021	Sanctioned strength of students excluding marginal increase if any	Lecture hours (subject wise)	Practical hours	Total hours of work load	No. of sanctioned posts (Uty.)	No of teachers permissible (UGC)	No of teachers working	Remarks
	I yr B.Com					11	11	11	6	6	8	2 excess teachers
	II yr B.Com					25	25	25				
	III yr B.Com					25	25	25				
	I yr M.Com					25	25	25				
	II yr M.Com					25	25	25				
	Total					111	111	111				

Certified that I have personally verified the work-load details given above with rules there in force and found correct. I will be personally responsible for any discrepancy that may be found at a later

Signature of the Head of the Department

Anila Balan
 ANILA BALAN.



R. Binu
 Principal
 Sree Narayana College, Alathur
 Palakkad-678 682, Kerala

PROFORMA-II

Statement showing the allotment of workload among the teaching staff for the year 2021-22 onwards

Name of the College : Sree Narayana College, Alathur

Name of the Department : Commerce

Sl No	Name of Teacher	Designation	Lecture work				Supervision Translation Correction Practical	No of Books	Total	
			UG		PG					
			I Year (I&II Sem)	II Year (III&IV Sem)	III Year (V&VI Sem)	II Year (III &IV Sem)				
1	ANILA BALAN	Asst. Professor		2	1	5	5		13.	
2	Dr. J. KOTHILAKSHMI	"	5	2	2		5		14	
3	ARCHANA KM.	"	4			5	5		14	
4	ROSINI. K	"		4	5	5			14	
5	BINU UDAYAKUMAR.	"		5	4	5			14	
6	SUDHEESH. TV.	"		2	7		5		14	
7	SHABNA BABU.	"		5	4	5			14	
8	REJI KRISHNA.	"	2	5	2		5		14	
Total Hours			(Excluding PG Weightage)							

Certified that I have personally verified the work-load details given above with rules therein force and found correct. I will be personally responsible for any discrepancy that may be found at a later time.



Signature of the Head of the Department: Anila Balan
Principal
Sree Narayana College,
Palakkad- 678.682, Kerala

S.N. College, Alathur
Department of Botany - Time Table 2021 - '22

		9.30 - 10.30	10.30 - 11.30	11.30 - 12.30	1.30 - 2.30	2.30 - 3.30
Monday	I Botany					
	II EWM	G2 (Bot Sub)				
	I Zool Sub	BM (Bot Sub)				G3 (Bot Main)
	II Bot					
	II EWM					G2 Main
	II Zool Sub					G2 Practical (Sub) BM
	III Botany	G1				
	III EWM		SJ/G1 Practical SJ/RB		G1	SJ (Open)
Tuesday	I Botany				G3 (Bot Main)	
	II EWM	G1/G2 Practical G1/G2				
	I Zool Sub		G3 (Bot Main)	G1 (Bot Sub)		
	II Bot			G2 (Bot Sub)		
	II EWM					
	II Zool Sub					
	III Botany	SJ/BM Practical SJ/BM				RB/G1 Practical RB/G2
	III EWM			BM	SJ (Open)	BM
Wednesday	I Botany		G1			
	II EWM					
	I Zool Sub					G2 Practical (Sub) G1
	II Bot					
	II EWM	BM (Bot Sub)				
	II Zool Sub	G2 (Bot Sub)				
	III Botany	SJ	BM/SJ Practical BM/G1		G1	SJ
	III EWM		G3 (Bot Core)			G3 (Bot Core)
Thursday	I Botany					
	II EWM					
	I Zool Sub	G2/BM Practical G1/BM				
	II Bot					
	II EWM					
	II Zool Sub					G2 (Bot Sub)
	III Botany	G2	SJ/G2 Practical SJ/G1		SJ	BM (Bot Sub)
	III EWM					SJ
Friday	I Botany			G2		
	II EWM			RB (Bot Main PRL)		
	I Zool Sub					
	II Bot		BM			G2/BM Practical SJ/RB
	II EWM	BM (Bot Sub)				
	II Zool Sub	G1 (Bot Sub)				
	III Botany	G2	G1	SJ (Open)	G1	BM
	III EWM	G3 Practical (Main) G3				

P. Binu

Principal

Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

PROFORMA-II

Statement showing the allotment of workload among the teaching staff for the year 2021-2022
 1. Name of College : Sree Narayana College, Alathur
 2. Name of Department : Botany
 3. Principal's Subject : Botany
 4. Post Vacant : Botany

Sl No	Name of Teacher	Designation	Lecturer work					Supervision / Translation/ Correction/ Practical			No of Books	Total
			UG			PG		I Year	II Year	III Year		
			I Year	II Year	III Year	I Year	II Year					
1.	Dr. R. Bindu	Associate Professor & Principal	-	-	-			-	3	2		5
2.	Dr. Shereena J	Assistant Professor & ANO	-	1	5			-	1	5		12
3.	Dr. Binamol M	Assistant Professor	1	4	3			2	2	4		16
4.	G1	Assistant Professor on Contract	2	1	5			4	1	3		16
5.	G2	Assistant Professor on Contract	3	3	2			4	3	1		16
6.	G3	Assistant Professor on Contract	2	-	6			1	-	3		12
Total Hours			8	9	21			11	10	18		77

Certified that I have personally verified the work-load details given above with rules there in force and found correct. I will be personally responsible for any disciplinary that may be found a later time

Alathur :
Date : 1/6/21



R. Bindu
Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

HP
Signature of the Head of the Department:

PROFORMA-II

Statement showing the allotment of workload among the teaching staff for the year 2021-2022

1. Name of College : Sree Narayana College, Alathur
 2. Name of Department : Botany
 3. Principal's Subject : Botany
 4. Post Vacant : Botany

Sl No	Name of Teacher	Designation	Lecturer work					Supervision / Translation / Correction / Practical			No of Books	Total		
			UG			PG		1 Year	II Year	III Year				
			I Year	II Year	III Year	I Year	II Year							
1.	Dr. R. Bindu	Associate Professor & Principal	-	-	-					-	3	2		5
2.	Dr. Shereena J	Assistant Professor & ANO	-	1	5					-	1	5		12
3.	Dr. Binumol M	Assistant Professor	1	4	3					2	2	4		16
4.	G1	Assistant Professor on Contract	2	1	5					4	1	3		16
5.	G2	Assistant Professor on Contract	3	3	2					4	3	1		16
6.	G3	Assistant Professor on Contract	2	-	6					1	-	3		12
Total Hours			8	9	21					11	10	18		77

Certified that I have personally verified the work-load details given above with rules there in force and found correct. I will be personally responsible for any disciplinary that may be found a later time

Alathur :
Date: 1/6/21



R Bindu
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Korala

[Signature]
Signature of the Head of the Department:

PROFORMA-I

Statement of workload for the year 2021-22 based on the student strength as on 01/06/2021 (for courses)

1. Name of College : Sree Narayana College, Alathur
 2. Name of Department : Botany
 3. Principal's Subject : Botany
 Commencement of I semester : 01/06/2022

Sl. No	Name of Course	Main	Sub/Language	Actual strength of students as on 30/08/22	Sanctioned strength of students excluding marginal increase if any	Lecture hours (subject wise)	Practical hours	Total hours of work load	No of sanctioned posts (Uty)	No of teachers permissible (UGC)	No of teachers working	Remarks
1	I Year I & II Sem Zoology		Botany Complimentary	33	24	2	2+2= 4	6	2	5	2	
2	I Year I & II Sem EWM		Botany Complimentary	27	24	2	2	4				
3	II Year III & IV Sem Zoology		Botany Complimentary	43	24	3	2+2=4	7				
4.	II Year III & IV Sem EWM		Botany Complimentary	49	24	3	2	5				
5.	I Year I & II Sem EWM	Environment Core Handled by Botany Dept,		27	24	3	0	3				
6.	III Year V & VI Sem EWM	Environment Core Handled by Botany Dept,		29	24	4	2	6				
7	I Year (I & II Sem Bot)	Botany Core		31	24	2	4	6				
8	II Year (III & IV Sem Bot)	Botany Core		44	24	3	4	7				
9	III Year (V & VI Sem Bot)	Botany Core		32	24	16	17	33				
Total hours						38	39	77				

Certified that I have personally verified the work-load details given above with rules there in force and found correct. I will be personally responsible for any discrepancy that may be found a later time

Alathur :
 Date : 1/6/22



S. Binchu
 Principal
 Sree Narayana College, Alathur
 Palakkad- 678 682, Kerala

[Signature]
 Signature of the Head of the Department:

SREENARAYANA COLLEGE, ALATHUR
TIME TABLE 2021 - 2022
DEPARTMENT OF ECONOMICS
EVEN SEMESTER

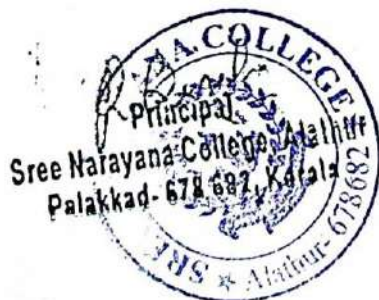
DAYS	I	II	III	IV	V
MONDAY	I.B.A POLI	I.B.A POLI	I.B.A ENG	I.B.A ENG	I.B.A LAN
	II.B.A STS	II.B.A ENG	II.B.A LAN	II.B.A SS	II.B.A DH
	III.B.A DH	III.B.A SS	III.B.A SS	III.B.A DH	III.B.A SS
TUESDAY	I.B.A DH	I.B.A SS	I.B.A SS	I.B.A LAN	I.B.A ENG
	II.B.A LAN	II.B.A HIS	II.B.A STS	II.B.A ENG	II.B.A HIS
	III.B.A SS	III.B.A DH A	III.B.A DH	III.B.A SS	III.B.A DH
WEDNESDAY	LB.A ENG	LB.A POLI	LB.A ENG	LB.A POLI	LB.A SS
	II.B.A HIS	II.B.A LAN	II.B.A HIS	II.B.A STS	II.B.A ENG
	III.B.A DH	III.B.A SS	III.B.A DH	III.B.A SS	III.B.A DH
THURSDAY	IB.A DH	LB.A DH	LB.A LAN	LB.A ENG	LB.A ENG
	II.B.A HIS	II.B.A LAN	II.B.A ENG	II.B.A STS	II.B.A HIS
	III.B.A SS	III.B.A SS A	III.B.A DH A	III.B.A SS A	III.B.A PROJECT
FRIDAY	I.B.A POLI	IB.A ENG	I.B.A POLI	I.B.A LAN	I.B.A ENG
	II.B.A STS	II.B.A DH	II.B.A LAN	II.B.A ENG	II.B.A DH
	III.B.A DH	III.B.A SS	III.B.A SS	III.B.A DH	III.B.A PROJECT

SS: SOWMYA S. (HOD OF ECONOMICS)

DH: DIWA H. (ASSISTANT PROF. OF ECONOMICS)

PRASATH.P (DEPT OF HISTORY)

JUMANA AZEEM.K (DEPT OF POLITICAL SCIENCE)



[Handwritten signature]

[Handwritten signature]
Principal
Sree Narayana College, Alathur
Palakkad - 678 682, Kerala

SREE NARAYANA COLLEGE, ALATHUR

TIME TABLE 2021 - 2022

DEPARTMENT OF ECONOMICS

ODD SEMESTER

DAYS	I		II		III		IV		V	
MONDAY	I.B.A	HIS	I.B.A	HIS	I.B.A	ENG	I.B.A	ENG	I.B.A	LAN
	II.B.A	STS	II.B.A	ENG	II.B.A	LAN	II.B.A	SS	II.BA	DH
	III.B.A	DH	III.B.A	SS	III.B.A	SS	III.B.A	DH	III.B.A	SS
TUESDAY	I.B.A	DH	I.BA	SS	I.B.A	SS	I.B.A	LAN	I.B.A	ENG
	II.B.A	LAN	II.B.A	POLI	II.B.A	STS	II.B.A	ENG	II.B.A	POLI
	III.B.A	SS	III.B.A	DH	III.B.A	DH	III.B.A	SS	III.B.A	DH
WEDNESDAY	I.B.A	ENG	I.B.A	HIS	I.B.A	ENG	I.B.A	HIS	I.B.A	SS
	II.B.A	POLI	II.B.A	LAN	II.B.A	POLI	II.B.A	STS	IIB.A	ENG
	III B.A	DH	III.B.A	SS	III.B.A	DH	III.B.A	SS	III.B.A	DH
THURSDAY	I.B.A	DH	I.B.A	DH	I.B.A	LAN	I.B.A	ENG	I.B.A	ENG
	II.B.A	POLI	II.B.A	LAN	II.B.A	ENG	II.B.A	STS	II.B.A	POLI
	III.B.A	SS	III.B.A	SS	III.B.A	DH	III.B.A	SS	III.B.A	PROJECT
FRIDAY	I.B.A	HIS	IB.A	ENG	I.B.A	HIS	I.B.A	LAN	I.B.A	ENG
	II.B.A	STS	II.B.A	DH	II.B.A	LAN	II.B.A	ENG	IIB.A	DH
	III.B.A	DH	III.BA	SS	III.B.A	SS	III.B.A	DH	III.B.A	PROJECT

SS: SOWMYA S. (HOD OF ECONOMICS)

DH: DIVYA H. (ASSISTANT PROF. OF ECONOMICS)



Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

[Signature]
Sree Narayana
Palakkad

12/1

PROFORMA-I

Statement of Workload for the year 2022-2023 based on the students' strength as on 01/06/2021 (for Degree)

1. Name of College : Sree Narayana College, Alathur
 2. Name of Department : ECONOMICS
 3. Principal's Subject : Botany

S L N o	Name of Course	Main	Sub/ Language	Actual Strength of Students as on 01/06/2021	Sanctioned strength of students excluding marginal increase if any	Lecture hours (Subject wise)	Project Hours	Total Hours of Workload	No. of sanctioned posts (Uty)	No. of teachers permissible (UGC)	No. of teachers working	Remarks
1	I & II SEMESTER	ECONOMICS	HISTORY & POLITICAL SCIENCE	56	40	6		6	2	2	2	3EXTRA HOURS
2	III & IV SEMESTER	ECONOMICS	HISTORY & POLITICAL SCIENCE	59	40	4		4				
3	V & VI SEMESTER	ECONOMICS		60	40	23	2	25				

Certified that I have personally verified the work load details given above with rules there in force and found correct. I will be personally responsible for any disciplinary that may be found a later time.

Place:-Alathur
Date:-01/06/2022



R. Binu
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

[Signature]
Signature of the Head of the Department
Assistant Professor & Head
Dept. of Economics
S.N. College, Alathur
Palakkad-678 682

PERFORMA-II

Statement showing the allotment of workload among the teaching staff from 01/06/2021 (for Degree)

Name of college : Sree Narayana College, Alathur

Name of Department : Political Science

SL. NO	Name of Teacher	Designation	Lecturer Work		Total
			UG		
			II YEAR	PROJECT	
1	MANOJ	GUEST LECTURER	6		6
		TOTAL	6		6

Certified that I have personally verified the workload details given above with rules there in force and found correct. I will be personally responsible for Any disciplinary that may be found a later time.

Place: Alathur

Date: 01/06/2021



Signature of the Head of the Department

Sowmya S.
SOWMYA S.
Assistant Professor & Head
Dept. of Economics
S.N. College, Alathur
Palakkad-678 682

P. Binu
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

PERFORMA-II

Statement showing the allotment of workload among the teaching staff from 01/06/2021 (for Degree)

Name of college : Sree Narayana College, Alathur

Name of Department : HISTORY

SL. NO	Name of Teacher	Designation	Lecturer Work		Total II YEAR
			UG		
			II YEAR	PROJECT	
1	ATHULYA	GUEST LECTURER	6		6
		TOTAL	6		6

Certified that I have personally verified the workload details given above with rules there in force and found correct. I will be personally responsible for Any disciplinary that may be found a later time.

Place: Alathur

Date: 01/06/2021



Signature of the Head of the Department

Sowmya S.
SOWMYA.S.
Assistant Professor & Head
Dept. of Economics
S.N.College, Alathur
Palakkad-678 682

R. Binu
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

SREE NARAYANA COLLEGE, ALATHUR

DEPARTMENT OF CHEMISTRY

TEACHING PLAN 2021-22

List of teachers

Sl no	Name of Teacher	Designation	Class	Work load
1	Dr.Rajesh K M	Assistant Professor	I year	1
			II year	4
			III Year	1
			Practicals	10
2.	Mr. Jiju K R	Assistant Professor		1
				4
				1
			Practicals	10
3.	Viswapriya K P	Assistant Professor On Contract		2
				2
				2
			Practicals	10
4.	Dr. Dasami P M	Assistant Professor On Contract		2
				2
			Practicals	2


Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

Dr Rajesh K M

Month	Class	Module	Remarks
SEPTEMBER	I SEM CHEMISTRY	THEORETICAL AND INORGANIC CHEMISTRY- MODULE 1 PRACTICAL- VOLUMETRIC ANALYSIS	
	III SEM CHEMISTRY	PHYSICAL CHEMISTRY - MODULE III	
	III SEM BOTANY	ORGANIC CHEMISTRY MODULE I PRACTICAL- VOLUMETRIC ANALYSIS	
	III SEM ZOOLOGY	ORGANIC CHEMISTRY MODULE I	
	III SEM EWM	ORGANIC CHEMISTRY MODULE I	
	III SEM EWM CORE	EWM ENVIRONMENTAL CHEMISTRY -MODULE 1	
	V SEM EWM OPENCOURSE	CHEMISTRY IN EVERYDAY LIFE- MODULE V PRACTICAL-WATER ANALYSIS	
OCTOBER	I SEM CHEMISTRY	THEORETICAL AND INORGANIC CHEMISTRY- MODULE 1 PRACTICAL- VOLUMETRIC ANALYSIS	
	III SEM CHEMISTRY	PHYSICAL CHEMISTRY - MODULE III	
	III SEM BOTANY	ORGANIC CHEMISTRY MODULE I PRACTICAL- VOLUMETRIC ANALYSIS	
	III SEM ZOOLOGY	ORGANIC CHEMISTRY MODULE I	
	III SEM EWM	ORGANIC CHEMISTRY MODULE I	
	III SEM EWM CORE	EWM ENVIRONMENTAL CHEMISTRY -MODULE 1	
	V SEM EWM OPENCOURSE	CHEMISTRY IN EVERYDAY LIFE-MODULE V PRACTICAL-WATER ANALYSIS	
NOVEMBER	I SEM CHEMISTRY	THEORETICAL AND INORGANIC CHEMISTRY- MODULE 2 PRACTICAL- VOLUMETRIC ANALYSIS	
	III SEM CHEMISTRY	PHYSICAL CHEMISTRY -	

		MODULE V	
	III SEM BOTANY	ORGANIC CHEMISTRY MODULE 2	
	III SEM ZOOLOGY	ORGANIC CHEMISTRY MODULE 2	
	III SEM EWM CORE	EWM ENVIRONMENTAL CHEMISTRY -MODULE 2	
	V SEM EWM OPENCOURSE	CHEMISTRY IN EVERYDAY LIFE-MODULE VI PRACTICAL-WATER ANALYSIS	
DECEMBER	I SEM CHEMISTRY	THEORETICAL AND INORGANIC CHEMISTRY- MODULE III PRACTICAL- VOLUMETRIC ANALYSIS	
	III SEM CHEMISTRY	PHYSICAL CHEMISTRY - MODULE V	
	III SEM BOTANY	ORGANIC CHEMISTRY MODULE II	
	III SEM ZOOLOGY	ORGANIC CHEMISTRY MODULE II	
	III SEM EWM CORE	EWM ENVIRONMENTAL CHEMISTRY -MODULE II	
	V SEM EWM OPENCOURSE	CHEMISTRY IN EVERYDAY LIFE-MODULE VI PRACTICAL-WATER ANALYSIS	

A. Binu

Sree Narayana College, Alathur
Palakkad-678 682, Kerala

DEPARTMENT OF MICROBIOLOGY, SREE NARAYANA COLLEGE ALATHUR

LESSON PLAN [ACADEMIC YEAR 2021-22] (ODD SEMESTER)

Name Of The Teacher: DIVYA R

CLASS	SUBJECT	MONTH	UNITS
I YEAR	GENERAL MICROBIOLOGY	AUGUST	Unit-3 Microscopy- bright field, dark field, phase contrast, fluorescent and electron microscopy.
		SEPTEMBER	Staining techniques- simple and differential.
		OCTOBER	Grams, spore, flagella, volutin, capsule, negative and Faelgen staining.
		NOVEMBER	Unit-4 Sterilisation techniques- Physical and chemical methods-
		DECEMBER	flaming, boiling, autoclaving, inspissation, Heat, filtration, Radlation.
		JANUARY	Aseptic methods- lamlnar air flow hood. Phenol coefficient.
II YEAR	BIODIVERSITY - SCOPE AND RELEVANCE	JUNE	Unit-1 Blodiversity - definition, importance
		JULY	Unit-2 Components of blodiversity, factors
		AUGUST	Unit-3 Loss of blodiversity, Significance
		SEPTEMBER	Unit-4 Values and uses of blodiversity Bloprospecting
		OCTOBER	Unit-5 Inventorying and monitoring of blodiversity UNIT 6 Conservation of blodiversity
III YEAR	IMMUNOLOGY	JUNE	Unit 1 Brief History of Immunology: Edward Jenner, Karl Landsteiner, Robert Koch, Paul Ehrlich, Elle Metchnikoff. Structure and function of the lymphoreticular system- composition

R. Binu
Principal
Sree Narayana College, Alathur
Palakkad- 676 662, Kerala

			<p>of blood and lymph and their immunological properties.</p> <p>Unit 2</p> <p>Immune Cells and Organs Structure, Functions and Properties of: Immune Cells – Stem cell, T cell, B cell, NK cell, Macrophage, Neutrophil, Eosinophil, Basophil, Mast cell, Dendritic cell; and Immune Organs – Bone Marrow, Thymus, Lymph Node, Spleen, GALT, MALT, CALT</p>
		JULY	<p>Unit 3</p> <p>Concept of innate, acquired immunity, Humoral and cell-mediated, natural and artificial immunity. Brief descriptions on mechanisms of innate immunological barriers- phagocytosis and inflammation.</p>
		AUGUST	<p>Unit 4</p> <p>Antigens – features. Hapten, complete antigen, adjuvants, epitope (antigenic determinants.). Factors influencing antigenicity. T dependent and T independent antigens. Role of MHC in antigen presentation- class I and class II, MHC Restriction. Basic structure of immunoglobulin – Ig G – Different classes of immunoglobulins and their function.</p>
		SEPTEMBER	<p>Antigenic determinants on antibodies (Isotypic, allotypic, idiotypic). Clonal selection theory. Production of Polyclonal & Monoclonal antibodies & their application. Hybridoma technology. Complement system- activation and functions.</p> <p>Unit 5</p> <p>Antigen and Antibody Reactions- Agglutination, Precipitation, Complement fixation test, neutralization, opsonization, Gel diffusion techniques, Immunoelectrophoresis, labeled antibodies –RIA, ELISA, Western blotting, Immunofluorescent techniques.</p>
		OCTOBER	<p>Unit 6</p> <p>Hypersensitivity – different types -</p>

		<p>immediate and delayed – Anaphylaxis, Immune complex diseases.</p> <p>Autoimmune diseases – mechanisms and classification. Transplantation Immunology mechanism of graft rejection.</p> <p>Unit 7</p> <p>Development and Causes of Cancer, Tumor Viruses, Oncogenes, Tumor Suppressor genes, Tumor antigens, Cancer Treatment- molecular approach.</p>
FOOD AND DAIRY MICROBIOLOGY	JUNE	<p>Unit-1</p> <p>Food as a substrate for microorganisms. Types of microorganisms in food – Source of contamination</p>
	JULY	<p>– Factors influencing microbial growth in foods (extrinsic and intrinsic)</p> <p>Microbial examination of food- viable colony count, examination of fecal Streptococci.</p>
	AUGUST	<p>Unit-2</p> <p>Physical and chemical properties of milk. Milk as a substrate for microorganisms. Types of microorganisms in Milk-bacteria, fungi and yeast. Sources of microbial contamination of milk.</p>
	SEPTEMBER	<p>Microbiological analysis of milk. Rapid platform tests- organoleptic, Clot on boiling (COB), turntable acidity alcohol test, DMC, sedimentation test and pH. Standard plate count, MBRT</p>
	OCTOBER	<p>Unit-3</p> <p>Food fermentations: Cheese, bread, yoghurt, idli, fermented pickles and fermented vegetables, Ice cream, – methods and organisms used. SCP, Probiotics and prebiotics.</p>

A. Binu

Principal
 Stee Narayana College, Alathu.
 Palakkad- 678 682, Kerala

LESSON PLAN [Academic Year 2021-2022]

Name of the Teacher: Dr. Lalitha R

CLASS	SUBJECT	MONTH	UNITS
I Year I semester	Biophysics and Biostatistics	November	<p>Unit 3. PH - Dissociation of water. Dissociation of a weak acid. Henderson Hasselbalch equation. Electrometric determination of pH, pH meter, PH value calculation. Buffer –Importance of buffers in biology.</p> <p>Unit 1: Introduction -Biostatistics: Definition, Characteristics of Statistics Importance, usefulness and limitation of statistics.</p> <p>Unit 2: Data - Types of data: classification based on Source of data, Compilation, Variable, Methods of data collection and classification. Types of sampling methods. Advantages and disadvantages of census and sampling method. Class intervals- exclusive and inclusive method, Frequency curve (types. skewness, kurtosis, ogive).</p>
		December	<p>Unit 5: Radiation Biology Radioactivity, different types ionizing radiations and their sources, Radioactive disintegration. Decay curve, half-life. Biological effects of ionizing radiations. Radiation therapy. Biological applications of radioisotopes. Radiation dosimetry- dose units and dose measurement. Radiation Detectors - GM Counter, Solid and Liquid Scintillation Counter, Proportional counter, Semiconductor detectors.</p> <p>Unit 3: Statistical Methods: Measures of central tendency and dispersal (4 hrs) Mean, (raw data, discrete series and continuous series). Standard deviation, Standard error, degree of freedom (raw data, discrete, series and continuous series), Quartile deviation- Box- whisker plot</p>
		January	<p>Unit 6: Biophysical methods (Brief account of the following) Properties of electromagnetic radiations. Molecular analysis using UV / visible spectroscopy. Mass spectroscopy. NMR and Electron Spin Resonance (ESR) spectroscopy, Structure determination using X-ray diffraction crystallography. Circular dichroism. Surface Plasma Resonance (SPR)</p>

R. Binu
Principal

			<p>Unit 5. Statistical inference Difference between parametric and non-parametric statistics; Testing of hypothesis , Errors, Confidence interval; levels of significance, Critical region; Normality test, t-test, chi-square test, F-test, ANOVA, Kruskal-Wallis, Mann-Whitney.</p>
		February	<p>Unit 9. Separation Techniques Chromatography - Different types - Adsorption, Partition and Ion exchange chromatography, Column, Paper & Thin- layer chromatography, Gel-filtration. Gas chromatography, Affinity chromatography, HPLC, Electrophoresis - Paper & Disc, PAGE, 2D PAGE, High voltage Electrophoresis, Isoelectric focusing.</p> <p>Unit 6. Correlation and Regression -Types of correlation. Methods to measure correlation- Scatter diagram. Karl pearson's coefficient of correlation, Spearman's correlation. Types of regression analysis, Regression equations. Difference between regression and correlation analysis</p>
		March	<p>Unit 7: Ecological data analysis - Alpha diversity, Shannon diversity index, Simpsons Dominance index, Pielou's evenness index, Margalef species Richness, Fisher's apha, Beta diversity , Morisita Horn index, Sorenson index, Bray-Curtis similarity.</p> <p>Unit 8: Principles and applications - SEM &TEM. Resolving powers of different microscopes. Different fixation and staining techniques for EM (freeze-etch and freeze fracture methods for EM-image processing methods in microscopy). Laser and its applications in Biology.</p>
II year III semester	Immunology	June	<p>Unit 1 & 2: Introduction & Hematopoiesis - Lymphoid and myeloid lineages. Hematopoietic growth factors. Genes that regulate hematopoiesis. Regulation of hematopoiesis. B- Lymphocytes, T- lymphocytes and Antigen presenting cells.</p>

		July	<p>Unit 3: Antigens - Immunogenicity, Antigenicity. Factors that influence immunogenicity. Adjuvants. Haptens. Epitopes. Properties of B-cell and T- cell epitopes.</p> <p>Unit 4: Immunoglobulins- Structure and function of Antibody molecules.</p>
		August	<p>Unit 4: Generation of Antibody diversity. Immunoglobulin gene. Antigenic determinants of Igs – Isotype, Allotype, Idiotype. B-cell receptor (BCR). MAB- Production of Monoclonal Antibodies (Hybridoma technology). Clinical uses and Antibody Engineering.</p>
		September	<p>Unit 6: Generation of B-cell and T-cell responses. Humoral immunity, Cellular immunity, T- Cell receptor, TCR-CD3 complex, Activation, maturation and differentiation of B-Cells. Activation, maturation and differentiation of T- Cells.</p>
		October	<p>Unit 7: Immune effect or mechanism. Cytokines. Properties of cytokines. Cytokine antagonists. Cytokine secretion by TH1 and TH2-cells. Cytokine related diseases- Bacterial septic-shock, Chaga's disease, lymphoid and myeloid cancers. Therapeutic uses of cytokines. Toll- like receptors.</p>
		November	<p>Unit 8: The Complement system - complement components. The functions of complement components. Complement activation (a) Classical, Alternate & Lectin pathway. Regulation of complement system. Biological consequences of complement activation. Complement deficiencies.</p> <p>Unit 9: Major Histocompatibility Complex (MHC)- General organization and inheritance of MHC. MHC molecules and genes. Cellular distribution of MHC. Antigen- processing and presentation-Exogenous and Endogenous pathways. Presentation of non- peptide antigens.</p>

R. Binu

Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

DEPARTMENT OF BOTANY
LESSON PLAN FOR THE YEAR 2021-22

Name of the teacher: **Dr. Shereena J**

B.Sc. Botany

Class	Subject	Month	Units
B.Sc. 1 st Semester	BOT1B01T CORE COURSE 1. Angiosperm Anatomy, Reproductive Botany & Palynology	August	1. Plant Cell Structure A. Cell wall – fine structure of primary and secondary wall; cell wall thickening; Pits - simple, bordered; Plasmodesmata their structure and function.
		September	B. Growth of cell wall Apposition, Intussusception C. Extra cell wall materials lignin, cutin, suberin, callose, wax. D. Cell wall properties. 2. Nonliving inclusions- Reserve food materials - carbohydrates, proteins, fats & oils Carbohydrates sugars & starch; Starch grains structure, types with examples; Proteins Aelurone grains with examples; Fats & oils examples.
		October	3. Secretory Material - Waste materials Nonnitrogenous- gums, Nitrogenous – alkaloids, resins, tannins, organic acids, essential oils; Mineral crystals Calcium oxalate, Drusses, Raphides, Calcium carbonate cystoliths with examples
		November	Tissues : Definition Types a. Meristematic tissues classification. i. Theories on apical organisation - Apical cell theory, Histogen theory, Tunica corpus theory ii. Organization of shoot apex and differentiation of tissues (protoderm, procambium and ground meristem should be mentioned). iii. KopperKappe theory- organization of root apex in dicots common types with three sets of initials- in monocots – Maize type with four sets of initials Mature tissues definition classification simple complex and secretory i. Simple tissues – parenchyma, collenchyma, sclerenchyma, fibres and sclereids- structure occurrence and function. ii. Complex tissues Definition Xylem & Phloem structure, origin and function iii. Secretory tissues glands, glandular hairs, nectaries, hydathodes, schizogenous and lysigenous ducts, resin ducts, Laticifers –articulated and non-articulated

R. Binu
Principal
Sree Narayana College, Alathur
Palakkad-678 682. Kerala

			<p>1.Principles of microscopy – eyepiece lens and objective lenses; Magnification, Resolving power, numerical aperture.</p> <p>2.Mechanical components: base, pillar, stage, sub stage, body tube, focusing knobs, nose pieces</p> <p>3. Optical components: mirror, objectives, ocular lens, condenser.</p> <p>4.Types of microscopes: Light microscope, Compound microscope, Phasecontrast microscope, Fluorescent microscope, Electron microscope: SEM, TEM</p> <p>5.Micrometry – Stage micrometer, Ocular micrometer, Calibration and working.</p> <p>6.Preparation of illustrations using camera lucida, digital camera and photomicrography</p>
B.Sc. II nd Semester	CORE COURSE 2. Microbiology, Mycology, Lichenology & Plant Pathology	January	<p>Mycology</p> <p>1. Introduction – General characters and phylogeny</p> <p>2. A general outline on classification – Ainsworth and Bisby (1983)</p> <p>3.Mastigomycotina : General characteristics, occurrence, reproduction, and life cycle – Type: Pythium, Albugo</p>
		February	<p>4.Zygomycotina: General characteristics, occurrence, reproduction, and life cycle – Type: Mucor</p> <p>5.Ascomycotina: General characteristics, occurrence, reproduction and life cycle – Type: Peziza.</p> <p>6.Basidiomycotina: General characteristics, occurrence, reproduction and lifecycle - Types: Puccinia, Agaricus</p>
		March	<p>Mycology</p> <p>1. Introduction – General characters and phylogeny</p> <p>2. A general outline on classification – Ainsworth and Bisby (1983)</p> <p>3.Mastigomycotina : General characteristics, occurrence, reproduction, and life cycle – Type: Pythium, Albugo</p> <p>4.Zygomycotina: General characteristics, occurrence, reproduction, and life cycle – Type: Mucor</p> <p>5.Ascomycotina: General characteristics, occurrence, reproduction and life cycle – Type: Peziza.</p> <p>6.Basidiomycotina: General characteristics, occurrence, reproduction and lifecycle - Types: Puccinia, Agaricus</p>
B.Sc. III rd Semester	BOT3B03T CORE COURSE 3. Phycology, Bryology & Pteridology	June	<p>7.Deuteromycotina: General characteristics, occurrence reproduction and life cycle Type: Cercospora.</p> <p>8.Economic importance of fungi: Medicinal, industrial, Agricultural, Food, Genetic Studies and fungal toxins.</p>
		July	Pteridology: Introduction, general characters and classification (Smith et al., 2008 – brief outline only)

		August	Study the distribution, morphology, anatomy, reproduction, life cycle and affinities of the following types (Developmental details are not required) – Selaginella, Psilotum
		September	Study the distribution, morphology, anatomy, reproduction, life cycle and affinities of the following types (Developmental details are not required)- Equisetum, Pteris
		October	Bryology: Study the distribution, morphology, anatomy, reproduction, life cycle and affinities of the following types (Developmental details are not required) a. Riccia (Marchantiophyta) b. Anthoceros (Anthocerotophyta) c. Funaria (Bryophyta) Economic Importance, Fossil Bryophytes, Evolution
B.Sc. IV th Semester	CORE COURSE 4 Methodology and Perspectives in Plant Science	November	1.Principles of microscopy – eyepiece lens and objective lenses; Magnification, Resolving power, numerical aperture. 2.Mechanical components: base, pillar, stage, sub stage, body tube, focusing knobs, nose pieces 3. Optical components: mirror, objectives, ocular lens, condenser. 4.Types of microscopes: Light microscope, Compound microscope, Phasecontrast microscope, Fluorescent microscope, Electron microscope: SEM, TEM 5.Micrometry – Stage micrometer, Ocular micrometer, Calibration and working. 6.Preparation of illustrations using camera lucida, digital camera and photomicrography
		December	1. General account of Killing and fixing, agents used for killing and fixing. Common fixatives – Formalin – Acetic – Alcohol, Carnoy's fluids I & II, Chromic acid – Acetic acid – Formation (CRAF) 2.Dehydration and infiltration – general account of dehydration (Ethanol, Isopropyl alcohol, Acetone, Glycerine). Ethanol – Xylene series and Tertiary Butyl Alcohol Series.
		January	3. Infiltration – paraffin wax method, Embedding. 4.Free hand sectioning; Microtome (Rotary and sledge) serial sectioning and its significance. 5.Staining – General account, Classification: natural dyes, coaltar dyes. Double staining, Vital staining 6. Mounting. 7. A brief account on whole mounting, maceration and smears
		February	1. Measures of central tendency: mean, median and mode 2. Measures of dispersion: Range, Mean Deviation, Variance, Standard Deviation, Coefficient of variation. 3. Correlation and regression (brief account). 4. Test of hypothesis: Null hypothesis, Alternate hypothesis Chi-square test.
		March	Introduction 2. Observations: direct and indirect observations, controlled and uncontrolled observations, human and machine observations. 3. Data collection: Introduction; Sampling; random and non-random. 4.

			Representation of data; Tables, Bar diagram, Pie diagram, Histogram, Frequency polygon, Ogive, Frequency curve [both manual and using computer]. 5. Interpretation and deduction of data, significance of statistical tools in data interpretation, errors and inaccuracies
B.Sc. V th Semester	BOTSBO5T CORE COURSE V GYMNOSPERMS, PALAEOBOTANY, PHYTOGEOGRAPHY & EVOLUTION BOTSBO9T CORE COURSE: 9 CELL BIOLOGY AND BIOCHEMISTRY	June	Distribution, morphology, anatomy, reproduction, life cycle and affinities of the following types (Developmental details are not required): a. Cycas b. Pinus c. Gnetum Macromolecules: building block biomolecules, metabolic intermediates, precursors), Carbohydrates. Classification; structure and functions of simple sugars and compound carbohydrates.
		July	Fossil formation and types of fossils, Geological time scale sequence of plants in geological time Lipids. Classification. Complex lipids, Simple lipids and derived lipids; Fatty acids saturated and unsaturated, triacyl glycerols, phospholipids, sphingolipids. Amino acids, peptides and proteins. Amino acids: classification based on polarity; zwitterions, dipeptides
		August	Fossil Pteridophytes Rhynia, lepidocarpon and Calamites, Fossil gymnosperms Williamsonia, Importance of Indian Paleobotanical Institutes (brief) Proteins: Primary, secondary, tertiary and quaternary structures of proteins. Native conformation and biological functions of proteins. Denaturation and renaturation. Nucleotides: structure, Functions of nucleotides and nucleotide derivatives.
		September	Patterns of plant distribution continuous distribution and discontinuous distribution, vicarism, migration and extinction, Continental drift - Evidences and impact. Glaciation: Causes and consequences.
		October	Theory of land bridges. Endemic distribution, theories on endemism, age and area hypothesis. Phytogeographical zones (phytochoria) of the world and India. Nucleotides: structure, Functions of nucleotides and nucleotide derivatives.
B.Sc. VI th Semester	BOT6B09T CORE COURSE - X GENETICS AND PLANT BREEDING CORE COURSE 11: Elective 3 BOT6B15T GENETICS AND CROP IMPROVEMENT	November	Introduction Brief account of Mendel's life history: Mendelian experiments: Monohybrid cross and dihybrid cross, Mendelian ratios, Laws of inheritance; Back cross, test cross. Allelic interactions: dominant – recessive, Incomplete dominance flower color in Mirabilis; Co dominance – Coat colour in cattle, Blood group in human beings; Lethal genes – Sickle cell anemia in Human beings. 1 Heteroploidy in crop improvement – achievements and future prospects – Significance of haploids and polyploids 2 Mutations in crop improvement – achievements and future prospects 3 Genetics of nitrogen fixation – Use of biofertilizers in crop improvement 4 Genetics of photosynthesis
		December	Interaction of genes: Non epistatic Comb pattern inheritance in poultry.(9:3:3:1): Epistasis: dominant Fruit colour in summer squashes; recessive epistasis Coat color in mice; Complementary gene interaction,

DEPARTMENT OF COMMERCE
TEACHING PLAN 2021-2022

Teacher In Charge: Anila Balan, Assistant Professor.

Subjects ; M.Com S3: Financial Markets and Institutions (5 hrs per week)

B.com S3: Business regulatory framework (3 hrs per week)

Date	hr	Class	Topic
Monday	5	3 rd sem M.Com	Holiday – Sree Narayana Guru samadhi
Tuesday	3	3 rd sem M.Com	Primary issue of securities -methods
	5	3 rd sem B.Com	Bailment
Wednesday	1	3 rd sem M.Com	Primary issue of securities -methods
Thursday	1	3 rd sem B.Com	Duties of Bailee
	2	3 rd sem M.Com	Assignment-functions of PFRDA
Friday	3	3 rd sem M.Com	Insurance-Seminar Sukritha
	4	3 rd sem B.Com	Rights of bailor

R. Bireln

Principal

Sree Narayana College, Alathur
Palakkad- 678 682, Kerala



Teacher in Charge : Dr. Jeothilakshmi.SK, Assistant Professor
 Subjects : M.Com S3= Investment Management (5 hrs/week)
 : B.Com S5= Cooperative Theory and Practice (4 hrs/week)

Details regarding online class handled during the week (21/09/2020 to 25/09/2020)

Day	Hr	Class	Topic
Monday	2	Vth Sem B.Com	Consumer Cooperative- Feature
	4	IIIrd Sem M.Com	Portfolio study
Tuesday	4	Vth Sem B.Com	NHB
	1	IIIrd Sem M.Com	Event Study
Wednesday	2	Vth Sem B.Com	Consumer Cooperative- Feature
	4	IIIrd Sem M.Com	Portfolio study
Thursday	3	Vth Sem B.Com	Advantages of CC
	5	IIIrd Sem M.Com	Regression & Correlation
Friday	1	IIIrd Sem M.Com	Filter test

R. Binu

Principal
 Sree Narayana College, Alathur
 Palakkad-678 682, Kerala



SREE NARAYANA COLLEGE ALATHUR
DEPARTMENT OF MATHEMATICS
DETAILS OF ONLINE CLASSES JUNE 2021

Name: Devadas V

Designation : Asst. Professor and HOD

Covid Duty -Sectoral Magistrate of Alathur Panchayath from 27th April 2021 to June 22nd 2021

Date	Class	Subject	Topic	Time	Mode
6/23/2021	I year MSC Mathematics	Real Analysis	Differentiation	9.30 am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Basic Set Theory	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	11.30am	Google Meeting
6/24/2021	I year MSC Mathematics	Real Analysis	Differentiation	9.30 am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Basic Set Theory	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	11.30am	Google Meeting
6/25/2021	I year MSC Mathematics	Real Analysis	Differentiation	9.30 am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Countable and Uncountable sets	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	1.00pm	Google Meeting
26-06-2021 (Saturday)	I year MSC Mathematics	Real Analysis	Differentiation	1.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Basic Set Theory	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	11.30am	Google Meeting
27-06-2021 (Sunday)	I year MSC Mathematics	Real Analysis	Differentiation	4.00pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Countable and Uncountable sets	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	11.30am	Google Meeting
28-06-2021(Exam Duty-9.30 to 12.30)					
29-06-2021(Exam Duty-9.30 to 12.30)					
6/30/2021	I year MSC Mathematics	Real Analysis	Differentiation	10.30am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Countable and Uncountable sets	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	12.30pm	Google Meeting

SREE NARAYANA COLLEGE ALATHUR
DEPARTMENT OF MATHEMATICS

A. Binu
 Principal
 Sree Narayana College, Alathur
 Palakkad- 678 682, Kerala

DETAILS OF ONLINE CLASSES JULY 2021

Name: Devadas V

Designation : Asst. Professor and HOD

Date	Class	Subject	Topic	Time	Mode
7/1/2021	I year MSC Mathematics	Real Analysis	Differentiation	12.30am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Real Number System	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	11.30am	Google Meeting
7/2/2021	I year MSC Mathematics	Real Analysis	Differentiation	12.30am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Basic Set Theory	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	11.30am	Google Meeting
7/5/2021	I year MSC Mathematics	Real Analysis	Measure Theory	2.00pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Countable and Uncountable sets	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	1.00pm	Google Meeting
7/6/2021	I year MSC Mathematics	Real Analysis	Measure Theory	4.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Basic Set Theory	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	11.30am	Google Meeting
7/7/2021	I year MSC Mathematics	Real Analysis	Measure Theory	9.30am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Algebraic properties	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	11.30am	Google Meeting
7/8/2021	I year MSC Mathematics	Real Analysis	Riemann Integration	4.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Countable and Uncountable sets	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	12.30pm	Google Meeting
7/9/2021	I year MSC Mathematics	Real Analysis	Measure Theory	4.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Algebraic properties	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	12.30pm	Google Meeting

July 12, 13 and 14 project viva for B.Sc Mathematics at NSS College Ottapalam

7/15/2021	I year MSC Mathematics	Real Analysis	Riemann Integration	12.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Ordered Properties	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	8.30am	Google Meeting

July 16,17 and 19 Vth sem B.Sc Valuation camp at Mercy College Palakkad

7/20/2021	I year MSC Mathematics	Real Analysis	Riemann Integration	5.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Algebraic properties	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Linearization	12.30pm	Google Meeting

July 22,23,24,26 and 27 Vith sem B.Sc Valuation camp at Govt. College Chittur

7/28/2021	I year MSC Mathematics	Real Analysis	Riemann Integration	12.30pm	Notes given
	Final Bsc Mathematics	Basic Analysis	Ordered Properties	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Linearization	12.30pm	Google Meeting
7/29/2021	I year MSC Mathematics	Real Analysis	Riemann Integration	8.30am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Ordered Properties	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Linearization	12.30pm	Google Meeting
7/30/2021	I year MSC Mathematics	Real Analysis	Measure Theory	8.30am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Ordered Properties	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Linearization	12.30pm	Google Meeting
7/31/2021	I year MSC Mathematics	Real Analysis	Riemann Integration	8.30am	Notes given
	Final Bsc Mathematics	Basic Analysis	Ordered Properties	11.30am	Notes given
	First Year Complementary Mathematics	Mathematics I	Linearization	12.30pm	Notes given

SREE NARAYANA COLLEGE ALATHUR

DEPARTMENT OF MATHEMATICS

DETAILS OF ONLINE CLASSES AUGUST 2021

Name: Devadas V

Designation : Asst. Professor and HOD

Date	Class	Subject	Topic	Time	Mode
8/2/2021	I year MSC Mathematics	Real Analysis	Riemann Integratio	6.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Real Number System	9.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	10.30am	Google Meeting
8/3/2021	I year MSC Mathematics	Real Analysis	Riemann Integratio	6.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Basic Set Theory	10.30 am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	11.30am	Google Meeting
8/4/2021	I year MSC Mathematics	Real Analysis	Measure Theory	12.00pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Countable and Uncountable sets	9.30am	Google Meeting
	First Year Complementary Mathematics		No class		
8/5/2021	I year MSC Mathematics	Real Analysis	Measure Theory	5.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Basic Set Theory	8.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	9.30am	Google Meeting
8/6/2021	I year MSC Mathematics	Real Analysis	Measure Theory	12.30pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Algebraic properties	9.30am	Google Meeting
	First Year Complementary Mathematics		No class		
8/9/2021	I year MSC Mathematics	Real Analysis	Riemann Integration	1.05pm	Google meeting
	Final Bsc Mathematics		No class		
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	9.00am	Google Meeting
8/10/2021	I year MSC Mathematics	Real Analysis	Measure Theory	10.30am	Google meeting
	Final Bsc Mathematics	Basic Analysis	Algebraic properties	9.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	12.30pm	Google Meeting
8/11/2020	I year MSC Mathematics	Real Analysis	Riemann Integration	4.00pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Real Number System	2.30pm	Google Meeting

	First Year Complementary Mathematics	Mathematics I	Limits and Continuity	8.30am	Google Meeting
8/12/2021	I year MSC Mathematics	Real Analysis	Measure Theory	3.00pm	Google meeting
	Final Bsc Mathematics	Basic Analysis	Real Number System	2.00pm	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Linearization	1.00pm	Google Meeting
	I year MSC Mathematics	Real Analysis	Measure Theory	11.00am	Notes given
8/13/2021	Final Bsc Mathematics	Basic Analysis	Real Number System	2.30pm	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Question paper discussion	10.00am	Google Meeting
	I year MSC Mathematics	Real Analysis	Measure Theory	8.30am	Google meeting
8/16/2021	Final Bsc Mathematics	Basic Analysis	Real Number System	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Exercise workout	12.30pm	Google Meeting
	I year MSC Mathematics	Real Analysis	Riemann Integration	2.00pm	Google meeting
8/17/2021	Final Bsc Mathematics	Basic Analysis	Real Number System	11.30am	Google Meeting
	First Year Complementary Mathematics	Mathematics I	Exercise workout	12.30pm	Google Meeting
	I year MSC Mathematics	Real Analysis	Sequences and Series of Functions	12.30pm	Notes given
8/31/2021	Final Bsc Mathematics	Basic Analysis	Real Number System	11.30am	Notes given
	First Year Complementary Mathematics	No class			

SREE NARAYANA COLLEGE, ALATHUR
Work load for the month of July 2021

Name of the Teacher: Dr. Sisira S, Guest Lecturer (In contract), Department of Physics

Sl no	Date	Day	Class	Topic	Online Platform
1	1/7/2021	Thursday	No class	No class	Exam invigilation duty
2	2/7/2021	Friday	IInd Sem Maths/Chem	Newton's rings formation , continuation and problems	Google meet
			EWM	Laws of motion, Mass and weight	Google meet
3	5/7/2021	Monday	IInd Sem Maths/Chem	No class	Exam invigilation duty
4	6/7/2021	Tuesday	IInd Sem Maths/Chem	Module II Introduction, Diffraction, Fresnel diffraction	Google meet
5	8/7/2021	Wednesday	IInd Sem Maths/Chem	Fraunhofer diffraction	Google meet
			EWM	Vertical motion of air parcel in the atmosphere	Google meet
6	9/7/2021	Thursday	IInd Sem Maths/Chem	Fraunhofer diffraction, continuation	Google meet
			EWM	Adiabatic process , Vertical stability of atmosphe	Google meet
7	10/7/2021	Friday	IInd Sem Maths/Chem	Chapter 1- Interference-Exam	Google Classroom
			EWM	Temperature inversion, types	Google meet
8	12/7/2021	Monday	IInd Sem Maths/Chem	No class	Exam invigilation duty
9	13/7/21	Tuesday	IInd Sem Maths/Chem	No class	Exam invigilation duty
10	14/7/21	Wednesday	IInd Sem Maths/Chem	Diffraction grating & Youngs experiment	Google meet
			EWM	Temperature inversion, air pollution, fog formation	Google meet
11	15/7/21	Thursday	IInd Sem Maths/Chem	Diffraction grating, resolving power	Google meet
			EWM	Horizontal motion of air in atmosphere	Google meet
12	16/7/21	Friday	IInd Sem Maths/Chem	Grating, experiment	Google meet
			EWM	Forces dependent/independent on velocity	Google meet
13	19/07/21	Monday	IInd Sem Maths/Chem	Grating dispersive power ,problems discussion	Google meet
14	20/7/21	Tuesday	IInd Sem Maths/Chem	No class	Holyday Bakrid
15	21/7/21	Wednesday	IInd Sem Maths/Chem	No class	Holyday Bakrid


 R. Binu
 Principal
 Sree Narayana College, Alathur
 Palakkad-678 682, Kerala

			EWM	Wind types-geotropic, gradient and frictional	Google meet
16	22/7/21	Thursday	IInd Sem Maths/Chem	Module III: Polarization, Brewsters law, Double refraction	Google meet
			EWM	Module III: Temperature & Heat, Heat transfer	Google meet
17	23/7/21	Friday	IInd Sem Maths/Chem	Positive and negative crystals, Quarter and half wave plate	Google meet
			EWM	Heat capacity, specific heat, Cp and Cv, examples	Google meet
18	26/7/21	Monday	IInd Sem Maths/Chem	Module 2: Exam	Google Classroom
19	27/7/21	Tuesday	IInd Sem Maths/Chem	Module IV: Semiconductor pn junction diode	Google meet
20	28/7/21	Wednesday	IInd Sem Maths/Chem	Polarization types, their production, optical activity	Google meet
			EWM	Temperature measurement: Different scales	Google meet
21	29/7/21	Thursday	IInd Sem Maths/Chem	Three chapters, combined concepts, problems discussion	Google meet
			EWM	Mode of heat transfer: Conduction, Convection and Radiation	Google meet
22	30/7/21	Friday	IInd Sem Maths/Chem	Module IV: Basics of semiconductors, pn junction diode characteristics	Google meet
			EWM	Gas laws: Boyle's, Charles' and Ideal gas laws	Google meet

Work load for the month of August 2021

Name of the Teacher: Dr. Sisira S, Guest Lecturer (In contract), Department of Physics

Date	Day	Class	Topic	Online Platform
2/8/2021	Monday	IInd Sem Maths/Chem	Half wave rectifier,efficiency,ripple factor	Google meet
3/8/2021	Tuesday	IInd Sem Maths/Chem	Full wave rectifier,efficiency,ripple factor	Google meet
4/8/2021	Wednesday	IInd Sem Maths/Chem	Bridge rectifier, filter circuits(inductor and capacitor)	Google meet
		EWM	X-rays characteristics, generation	Google meet
5/8/2021	Thursday	IInd Sem Maths/Chem	Zener diode characteristics and voltage stabilization	Google meet
		EWM	X-rays production and detection	Google meet
6/8/2021	Friday	IInd Sem Maths/Chem	Transistors, pnp and npn, CE configuration	Google meet
		EWM	Module II Fluids, Introduction, Hydrostatic pressure	Google meet
9/8/2021	Monday	IInd Sem Maths/Chem	Transistors, CB configuration, Current amplification factors	Google meet
10/8/2021	Tuesday	IInd Sem Maths/Chem	No Class	International webinar series Talk 1
11/8/2021	Wednesday	IInd Sem Maths/Chem	Comparison between CE and CB configuration	Google meet
		EWM	Exam Module 1	Google class room
12/8/2021	Thursday	IInd Sem Maths/Chem	No Class	International webinar series-Talk 2
		EWM	Pressure measurements	Google meet
13/8/21	Friday	IInd Sem Maths/Chem	Amplifier circuit, CE amplifier, Frequency response and band width	Google meet
		EWM	Pascal's law	Google meet
16/8/21	Monday	IInd Sem Maths/Chem	No class	Exam Invigilation duty
17/8/21	Tuesday	IInd Sem	Feed backing and oscillator circuit	Google meet

		Maths/Chem		
18/8/21	Wednesday	IInd Sem Maths/Chem	Logic gates, Universal gates, Exclusive OR, de Morgan's Theorem	Google meet
		EWM	Variation of pressure with depth	Google meet
31/8/21	Tuesday	IInd Sem Maths/Chem	Laser, Induced absorption, spontaneous and stimulated emission	Google meet

SREE NARAYANA COLLEGE, ALATHUR					
Work load for the month of September 2021					
Name of the Teacher: Dr. Sisira S, Guest Lecturer (In contract), Department of Physics					
Sl no	Date	Day	Class	Topic	Online Platform
1	1/9/2021	Wednesday	II Sem Maths&Chem	Laser, solid state laser, two level laser	Google meet
			V Sem EWM	Syllabus discussion	Google meet
			III Sem EWM	Syllabus discussion	Google meet
2	2/9/2021	Thursday	V Sem EWM	Archimedes' principle	Google meet
			III Sem EWM	Topic selection, Criteria for topic selection	Google meet
3	3/9/2021	Friday	V Sem EWM	Bernoulli's principle	Google meet
			III Sem EWM	Steps for topic selection topic to questions for research	Google meet
4	6/9/2021	Monday	III Sem Maths&Chem	Gas laser, He-Ne laser, four level laser	Google meet
			III Sem EWM	Planning research - Different steps (time, literature survey, hypothesis)	Google meet
5	7/9/2021	Tuesday	III Sem Maths&Chem	Third sem- Syllabus discussion	Google meet
			III Sem EWM	Planning research - Different steps (methodology, execution, thesis writing)	Google meet
6	8/9/2021	Wednesday	III Sem Maths&Chem	Introduction, rest, motion, frames of references, examples	Google meet
			V Sem EWM	Venturimeter	Google meet
			III Sem EWM	Defining objectives	Google meet
7	9/9/2021	Thursday	V Sem EWM	Torricelli's theorem	Google meet

			III Sem EWM	Preparation of work plans	Google meet
			V Sem EWM	Stream flow, turbulent flow	Google meet
8	#####	Friday	III Sem EWM	Execution of reserch plans, testing hypothesis, trial an error methods	Google meet
			III Sem Maths&Chem	Inertial and non inertial frames of references	Google meet
9	13/9/21	Monday	III Sem EWM	Identification of suitable method	Google meet
			III Sem Maths&Chem	Galilean transformation equations	Google meet
10	14/9/21	Tuesday	III Sem EWM	Preparation of research proposal	Google meet
			III Sem Maths&Chem	Fictitious force, Galilean principle of invariance	Admission
			V Sem EWM	No class	Admission
11	15/9/21	Wednesday	III Sem EWM	No class	Attending an interview
			V Sem EWM	No class	
12	16/9/21	Thursday	III Sem EWM		
			V Sem EWM	Stream flow measurements, units	Google meet
13	17/9/21	Friday	III Sem EWM	Summer schools, Advantages	Google meet
			III Sem Maths&Chem	Non inertial frames, rotating frames, centrifugal force, Coriolis force	Google meet
14	20/9/21	Monday	III Sem EWM	Summer schools, organization	Google meet
			III Sem Maths&Chem	No class	Holyay
15	21/9/21	Tuesday	III Sem EWM		
			III Sem Maths&Chem	Module 2- Introuction, Conservation of linear momentum	Google meet
			V Sem EWM	water current meeter working	Google meet
16	22/9/21	Wednesday	III Sem EWM	Training in research instituits	Google meet
			V Sem EWM	vertical axis current meeter	Google meet
17	23/9/21	Thursday	III Sem EWM	Training in research instituits	Google meet
			V Sem EWM	Horizontal axis meeter, ifferece from that of vertical axis meeter	Google meet
18	24/9/21	Friday	III Sem EWM	Module II - Introduction to literature survey	Google meet
			III Sem Maths&Chem	Linear momentum conservation of system of particles	Google meet
19	27/9/21	Monday	III Sem EWM	Collection of literature, Ethics, reliability	Google meet
20	28/9/21	Tuesday	III Sem Maths&Chem	Rocket propulsion, Equation of motion	Google meet

			III Sem EWM	News articles	Google meet
			III Sem Maths&Chem	Multistage rockets	Google meet
21	29/9/21	Wednesday	V Sem EWM	Area velocity method	Google meet
			III Sem EWM	News letters	Google meet
			V Sem EWM	discharge calculation	Google meet
22	30/9/21	Thursday	III Sem EWM	Module 1- Exam	Google meet

SREE NARAYANA COLLEGE, ALATHUR					
Work load for the month of October 2021					
Name of the Teacher: Dr. Sisira S, Guest Lecturer (In contract), Department of Physics					
Sl no	Date	Day	Class	Topic	Online Platform
1	#####	Friday	III Sem EWM	Journals, definition, main characteristics	Google meet
2	#####	Monday	V Sem EWM	Discharge relationship	Offline
			III Sem EWM	Magazines, classifications, compared to newspapers	Google meet
3	#####	Tuesday	III Sem EWM	comparison between journals and magazines	Google meet
4	#####	Wednesday	V Sem EWM	Hydrometer, construction and classification	offline
			III Sem Maths&Chem	Angular momentum conservation	Google meet
			III Sem EWM	Literature review by printed media in research	Google meet
5	#####	Thursday	III Sem Maths&Chem	Center of mass, CM of a two particle system and of N particle	Google meet
			III Sem EWM	Digital library , concept, need, technical issues	Google meet
6	#####	Friday	III Sem EWM	Digital library and traditional library, advantages, disadvantages	Google meet
7	#####	Monday	V Sem EWM	Energy sources, solar energy	Google meet
			III Sem EWM	key word search in research	Google meet
8	#####	Tuesday	V Sem EWM	Solar energy, measurement systems, applications	Google meet
			III Sem EWM	internet search- google scholar articles search	Google meet

9	13/10/21	Wednesday	III Sem Maths&Chem	Central force and characteristics	Google meet
			III Sem EWM	Science Direct articles search	Google meet
10	14/10/21	Thursday	III Sem Maths&Chem	No Class	Pooja Holyday
			III Sem EWM		
11	15/10/21	Friday	III Sem EWM	No Class	Pooja Holyday
12	18/10/21	Monday	V Sem EWM	Energy apsrption by atmosphere	Google meet
			III Sem EWM	Assignment: journal search from science direct and google cholar: its discussion by each student	Google meet
			V Sem EWM	Energy apsrption by atmosphere	Google meet
13	19/9/21	Tuesday	III Sem EWM	Different Publications: Elsevier, Springer, ACS, IOP....etc	Google meet
			III Sem Maths&Chem	Energy work force. Work done by variable forces	Google meet
14	20/9/21	Wednesday	III Sem EWM	Open access Journals	Google meet
			III Sem Maths&Chem	Work calculation, Problems	Google meet
15	21/9/21	Thursday	III Sem EWM	Inflibnet, shodhganga, searching PhD Thesis	Google meet
16	22/10/21	Friday	V Sem EWM	No Class	Study leave
17	25/10/21	Monday	III Sem EWM	Agricola search engine, different search methods, Afternoon; doing pending lab work of final year mathematics students	Offline
18	26/10/21	Tuesday	III Sem EWM	Pubmed and medline search/ afternoon ; doing pending lab work of final year mathematics students	Offline
19	27/10/21	Wednesday	III Sem Maths	Energy, Work done by variable force	Offline
			III Sem EWM	no class- doing pending lab work of final year mathematics students	Offline
20	28/10/21	Thursday	III Sem Maths&Chem	no class- valuation	
			III Sem EWM	no class- valuation	
21	29/10/21	Friday	III Sem EWM	no class -valuation	

SREE NARAYANA COLLEGE, ALATHIUR

Work load for the month of November 2021

Sl no	Date	Day	Class	Topic	Online Platform
1	1/11/2021	Monday	II BSc Maths &Ch	Energy, Kinetic energy, Power	Offline
			III BSc EWM	studyleave	
			II BSc EWM	Review articles	Offline
2	2/11/2021	Tuesday	II BSc EWM	short communications	Offline
			II BSc Maths &Ch	Work energy theorem	Offline
			III BSc EWM	studyleave	
			I BSc Maths &Ch	Elasticity, introduction	Offline
3	3/11/2021	Wednesday	II BSc EWM	Question paper answering	Offline
			III BSc EWM	studyleave	
			I BSc Maths	Lab	Offline
4	4/11/2021	Thursday		No class	Diwali
5	5/11/2021	Friday	I BSc Maths &Ch	Elasticity, hooks law , types	Offline
			II BSc Maths	Lab	Offline
			II BSc Maths &Ch	work, energy related problems	Offline
6	8/11/2021	Monday	II BSc Maths &Ch	Conservative force, examples	Offline
			II BSc EWM	Exam (First module)	Offline
7	9/11/2021	Tuesday	II BSc EWM (2 hrs)	Protocol formulation	Offline
			II BSc Maths &Ch	Conservative force, problems	Offline
8	#####	Wednesday	II BSc EWM	methodology selection via protocol	Offline
			I BSc Maths	lab	Offline
9	#####	Thursday	II BSc Chem	lab	Leave
			II BSc Chem	lab	
10	#####	Friday	I BSc Maths &Ch	Modulus of elasticity, types	Offline
			II BSc Maths	lab	Offline
			II BSc Maths &Ch	Potential energy, force-negative gradient	Offline
11	15/11/21	Monday	II BSc Maths &Ch	Potential energy curve,detail explanation	Offline

			II BSc EWM		Offline
12	16/11/21	Tuesday	II BSc EWM (2 hrs)	exam (second module) Observation - types, assignment writing	Offline
13	17/11/21	Wednesday	III EWM	studyleave	
			I BSc Maths	lab	Offline
14	18/11/21	Thursday	II BSc Chem	lab	Offline
			II BSc Chem	lab	Offline
15	19/11/21	Friday	I BSc Maths &Ch	Elasticity -stress-strain graph	Offline
			II BSc Maths	lab	Offline
			II BSc Maths &Ch	Potential well -stable, unstable equilibrium	Offline
16	22/11/21	Monday	II BSc Maths &Ch	Previous year questions:Problems	Offline
			II BSc EWM	Structured and peer observation	Offline
17	23/11/21	Tuesday	II BSc EWM (2 hrs)	Experimental research	Offline
			II BSc Maths &Ch	doing Problems	Offline
18	24/11/21	Wednesday	II BSc EWM	Comparison between experimental and observational research	Offline
			I BSc Maths	lab	Offline
19	25/11/21	Thursday	II BSc Chem	lab	Offline
			II BSc Chem	lab	Offline
20	26/11/21	Friday	I BSc Chem	Couple per unit twist of a cylinder	Offline
			II BSc Maths	lab	Offline
			II BSc Maths &Ch	Third module introduction	Offline
21	29/11/21	Monday	II BSc Maths &Ch	studyleave	
			II BSc EWM	studyleave	
22	30/11/21	Tuesday	II BSc EWM (2 hrs)	studyleave	
			II BSc Maths &Ch	studyleave	

SREE NARAYANA COLLEGE, ALATHIUR

PG DEPARTMENT OF ENGLISH

TEACHING PLAN

JUNE- OCTOBER 2021-22

Name of Teacher: Uma Govind

Class/ Programme	Topic/ Course	Hours	June	July	August	September	October
I FE	Literatures in English	1	T.S Eliot, W.B Yeats	Dylan Thomas	Ted Hughes	Matthew Arnold	Robert Browning
II FE	Applied Phonetics	2	Organs of Speech	Vowels	Consonants	Speech Mechanism	Allophones
III FE	Translation Studies, Criticism and Theory	3	Basic Concepts of Translation	Types of Translation	Equivalence	Untranslatability	Technology and Translation
I MA	19 th Century British Literature, Indian Literature, History of English Language	5	Romanticism Coolie, Language families	William Blake, Wordsworth, Tagore, Origin of English	Coleridge, Rossette, Meena Alexander, Old English	Charles Lamb, Middle English Period	Charles Dickens, Modern English Period
II MA	Literary Theory, World Drama, Linguistics	5	Eco Criticism : Major Theorist, Key Concepts	Phonology and Phonetics	Sudraka, Morphology	Piradello	Branches of Linguistics

P. Dinu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

U. Govind

SREE NARAYANA COLLEGE, ALATHUR

PG DEPARTMENT OF ENGLISH

TEACHING PLAN

NOVEMBER- MARCH 2021-22

Name of Teacher: Uma Govind

Class/ Programme	Topic/ Course	Hou rs	November	December	January	February	March
I FE	Advance English Grammar	1	Nouns	Sentence Structure	Sentence Types	Concord	Revision
II FE	Linguistics	2	Introduction	Definition	Nature and Scope	Key Concepts	Revision
III FE	Creative Writing, Film Studies	3	Introduction to Creative Writing	Voice, Word	Image Story	Publication	Plagiarism
I MA	20 th Century British Literature, Literary Theory, Post Colonial	5	Poetry- The Wasteland	Modern Fiction,	James Joyce, Longinus	Theory of Dwani, Things Falls Apart	Our Country's Good
II MA	21 st Century Literature, Film Studies, Indian English	5	Ayad Akhtar: Disgraced	Wimal Dissanayake	Gone with the Wind, Glass	The Blind Lady's Descendants	Mulk Raj Anand : Coolie

A. Binu
Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

Uma Govind

SREE NARAYANA COLLEGE ALATHUR
DEPARTMENT OF ECONOMICS
LESSON PLAN
[ACADEMIC YEAR 2021-22]

NAME OF THE TEACHER: SOWMYA. S

CLASS	SUBJECT	MONTH	UNITS
I SEMESTER	MICROECONOMICS-1	SEPTEMBER	Introduction to micro economics
		OCTOBER	Price Determination in competitive market
		NOVEMBER	Theory of consumer behaviour
		DECEMBER	Theory of production
		JANUARY	Theory of production
III SEMESTER	MICROECONOMICS-II	September	Market structure-perfect competition
		October	Monopoly
		November	Monopolistic competition and oligopoly
		December	Pricing and employment of inputs
		January	Market structure-perfect competition
V SEMESTER	a) MATHEMATICAL ECONOMICS b) INDIAN ECONOMICS DEVELOPMENT	JUNE	Introduction to Mathematical Economics- Development policies and experience 1947-1990
		JULY	Marginal concepts-Economic reforms since 1991
		AUGUST	Optimization-Gross domestic product and sectors
		SEPTEMBER	Production function, linear programming and input output analysis-current challenges facing the Indian economy
		OCTOBER	Market equilibrium-Kerala's economic development
VI SEMESTER	a) DEVELOPMENT OF ECONOMIC THOUGHT b) ECONOMICS OF GROWTH AND DEVELOPMENT c) URBAN ECONOMICS d) PROJECTWORK	NOVEMBER	Mercantilism & physiocrats—Development and under development an overview— Definition and scope of urban economics
		DECEMBER	British political economy—perception about development and under development—Urban local government and types
		JANUARY	Socialism—facts about economic growth—urban labour markets
		FEBRUARY	Indian economic thought—development and environment—urbanization in India
		MARCH	Project work



R. Biniphan
 Sree Narayana College, Alathur
 Palakkad- 678 682, Kerala

VI SEMESTER	a) MATHEMATICAL ECONOMICS	NOVEMBER	ME-Introduction to Mathematical economics, D E- perspectives on development Economics
	b) DEVELOPMENT ECONOMICS	DECEMBER	Marginal Concepts, Theories of Development, E E-Introduction and Theoretical discourse of Environmental Economics
	c) ENVIRONMENTAL ECONOMICS	JANUARY	Optimization-Economic Planning- Major environmental Problems in India
		FEBRUARY	Production function and linear programming and input out analysis- Issues in development-Economics of sustainable development and regulating mechanism
		MARCH	Market equilibrium-

SIXTH SEMESTER BA DEGREE EXAMINATION, OCTOBER 2021

BA ECONOMICS

MODEL QUESTION PAPER

ECO 6B14 ECONOMICS OF GROWTH AND DEVELOPMENT

Time :2.30 hours

Maximum :80 marks

Section A (short Answer Questions)

Answer at least ten questions.

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 30.

1. Define economic development
2. explain Lorenze curve
3. Explain Gini coefficient
4. vicious circle of poverty
5. Distinguish between GDI and HDI
6. Global warming and its causes
7. Define Multiple equilibrium
8. Define steady state in solow model
9. Food security
10. What is Endogenous growth theory
11. Romer's model
12. Define Kuznets inverted U Hypothesis
13. What is Development Gap
14. Explain the components MPI
15. sens capability approach

Section B(short Essay/Paragraph Questions)

Answer at least Five questions.

Each question carries 6 marks.

All questions can be attended.

Overall Ceiling 30.

16. what is the difference between Economic growth and development
17. critically explain Rostow stages of economic growth
18. Explain the contributions of AK model of growth Theory
19. Explain Harris Todaro migration model

R. Binu
Principal

Sree Narayana College, Alathur
Palakkad- 678 682, Kerala.



20. Explain the features of under developed countries

21. Briefly explain Big push Theory

22. Briefly explain the major measures of poverty

23. Explain the Axioms of inequality

Section C (Essay Questions)

Answer any two questions.

Each question carries 10 marks.

24. Explain the components, problems and policies of sustainable development

25. Neoclassical growth model illustrate how steady state can be achieved. Discuss

26. Explain the balanced and unbalanced growth strategies of development

27. Briefly explain the critical minimum effort break low level equilibrium trap of under developed economies



Economics of Growth and Development.

Section - A

1, Economic development

→ According to Colin Clark "Economic development is simply an increase in Economic welfare."

→ 'Redistribution of Growth' became a common slogan of Economic development.

→ ~~some~~ State that the core theme of human wellbeing is 'Freedom of choice' by enhancing people's capabilities for attaining a higher standard of health, knowledge, self respect and ability to participate actively in common life.

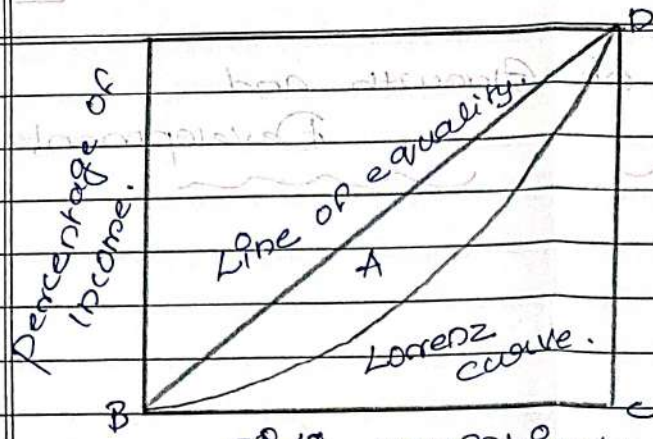
2, Lorenz curve.

→ Lorenz curve is an -the graphical representation of income inequality or wealth inequality.

→ Lorenz curve was developed by Max. O. Lorenz in 1905.

→ It is a way of showing the distribution of income or wealth within an economy. It is not representing wealth distribution.

It shows the cumulative share of income from different sections of the population.



Gini coefficient

Percentage of population.

3. Gini Coefficient

- Gini coefficient is the most widely used measure of inequality.
- It was developed by Corrado Gini in 1912.
- The Gini coefficient represents the areas between the Lorenz curve and the 45° degree line of equality. Gini coefficient is the ratio of the area between the line of equality and the Lorenz curve and to the sum of half square.
- coefficient value 0 stand for perfect equality and 1 for perfect inequality.
- If there is perfect equality, the line of equality and Lorenz curve get merged and the value of Gini coefficient will be zero.

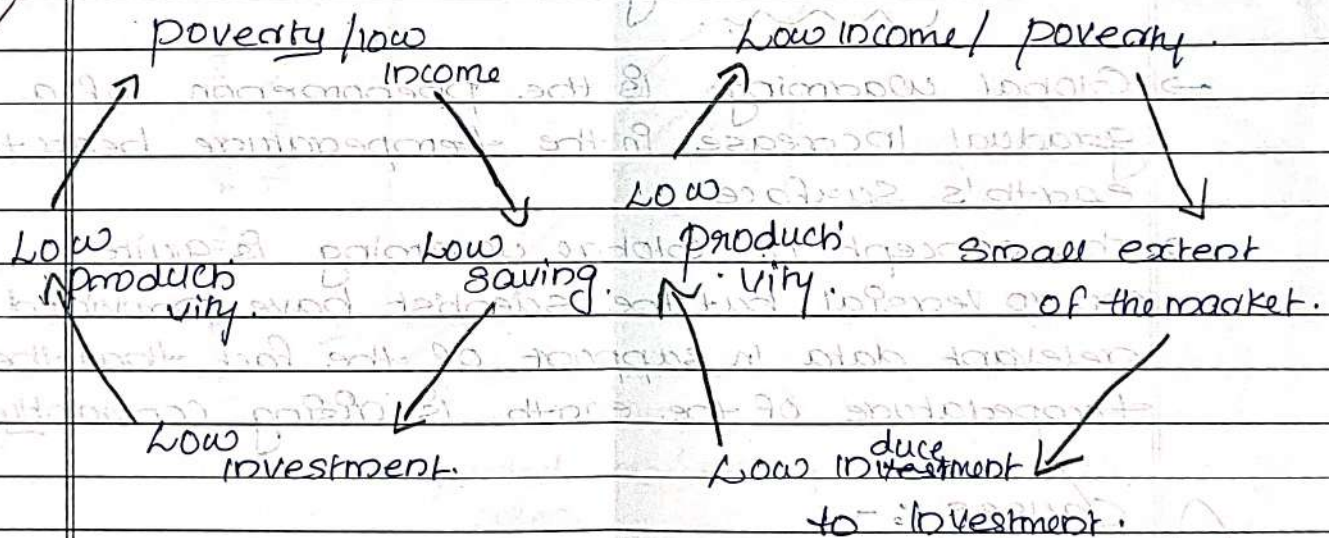


4. Vicious circle of poverty.

- Vicious circle of poverty is introduced by Ragnar Nurkse. It is a chain circle.
- Ragnar Nurkse explained the vicious circle as "a circular constellation of forces tending to act and react upon one another in such a way as to keep a poor country in a state of poverty... A country is poor because it was poor".
- Vicious circle operates in underdeveloped economy on the supply side as well as demand side.

Supply side :-

Demand side :-



5. GIDI and HDI.

Gendered Development Index (GDI).

- Gendered Development Index is the ratio of the female to male HDI values.



→ The aim of GDI is to supplement a gender sensitive dimension to the Human Development Index.

→ It addresses gender gaps in life expectancy, education and incomes.

Human Development Index (HDI).

→ HDI was developed by Mahabub ul Haq.

→ HDI is a composite multidimensional index.

Three components :-

- Long and healthy life.
- Education.
- A decent standard of living.

6. Global Warming.

→ Global warming is the phenomenon of a gradual increase in the temperature near the earth's surface.

→ The concept of global warming is quite controversial but the scientist have provided relevant data in support of the fact that the temperature of the earth is rising constantly.

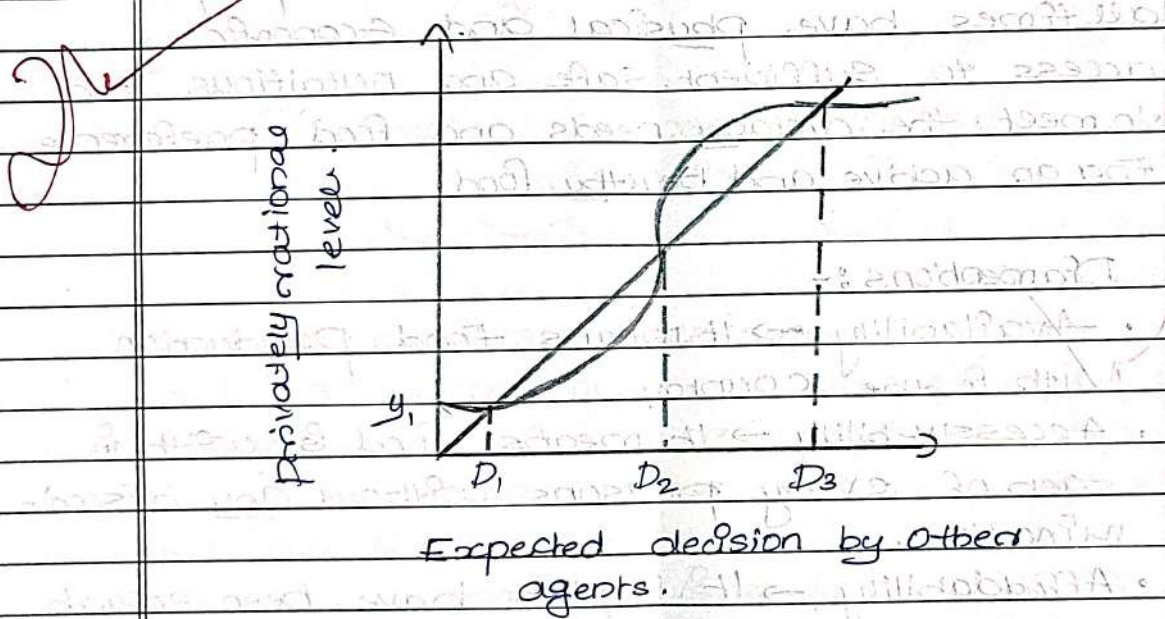
Causes :-

- Deforestation.
- Use of vehicles.
- Chlorofluoro carbon.
- Industrial development.
- Over population.



7. Multiple equilibrium.

- Multiple equilibrium is a situation of more than one equilibrium situation but need not precede the economy to be the preferred outcome. Solow growth model is generally taken to explain how multiple equilibria occurs.
- Equilibrium occurs when the S-shaped curve crosses the 45-degree line. It happens when the privately rational decision function crosses 45 degree line and at this point, the expected average investment rate in the economy is equal to the individual investment rate.



8. Solow Model.

- Solow model is developed by Robert Solow.
- It is also known as Production Function Model and Input output model.

→ According to Solow "Growth comes from more capital and labour inputs and also from ideas & technology".

Assumption.

- Wage price flexibility.
- Full employment.
- $y = f(L \text{ \& } K)$.
- constant returns to scale (increase input leads to increase in output).

9. Food Security

→ Food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet the dietary needs and food preferences for an active and healthy food.

Dimensions:-

- Availability → It means food production within the country.
- Accessibility → It means food is within reach of every person without any discrimination.
- Affordability → It implies have been enough money to buy sufficient, safe and nutritious food to meet one's dietary needs.



20. Endogenous Growth Model.

→ The model which tries to explain technical progress, labour growth and the role of the government in promoting growth besides discovering the other determinants is termed as the Endogenous growth Model.

→ This model is also known as New Growth Model.

→ New Growth theory attempted to explain the factors which prevent the marginal product of capital from falling.

Section B.

16. Difference between Economic Growth & Development.

→ Growth may be necessary but not a sufficient condition for development.

→ Economic growth is referred to the increase of per capita real gross domestic product over a period of time.

→ Economic development is a qualitative process and refers to structural change of economic and social infrastructure in an economy, which allows an increase in the standard of living in a nation's population.

Economic Growth.Economic Development.

- According to Sen 'Growth is one aspect of the process of economic development'.
- Growth deals with increase in economy's productive capacity and output.
- Growth relates to a gradual increase in GDP, consumption, govt spending, investment, net exports.
- Growth refers to increase in the real output of goods and services like increase in the income, saving, investment etc.
- Growth is quantitative. Increase in macro indicators such as GDP, per capita GDP, saving investment ratio etc.
- Brings quantitative changes in the economy.
- Narrower concept than economic development.
- According to Sen 'Development is about creating freedom for people and removing obstacles to greater freedom.'
- Development deals with structural changes in the economy.
- Development deals with growth of human development Indexes and quality of life.
- Development implies changes in income, saving and investment along with changes in socio-economic structure of an economy.
- Quantitative - Human development Index, gender related index, Human Poverty Index etc.
- Brings qualitative & quantitative changes in the economy.
- A broader concept.



→ Growth can be attained without development. → Development is possible without attaining growth.

→ Growth is an automatic process. → Development is an outcome of conscious and deliberate effort of the States.

→ Development Growth is the problem of developed countries. → Development is the problem of under developed countries.

17. Rostow Stages of Economic Growth.

→ Stages of Economic Growth is introduced by W.W. Rostow in 1996.

→ Five Stages of Economic Growth.

- Traditional society :- Rostow defines a traditional society "as one whose structure is developed within the limited production function based on pre-Newtonian science and technology and as pre-Newtonian attitudes towards the physical world".

- Pre conditions to take off :- These conditions mainly comprise fundamental changes in the social, political and economic fields. There is a change in the attitude of the people who start viewing the world where there are possibilities of future growth.

• The take off stage :- This is the crucial stage which covers a relatively brief period of two or three decades in which the economy transforms itself in such a way that economic growth subsequently takes place more or less automatically.

• Drive to maturity :- The initial key industries which sparked the take off decelerate as diminishing return set in. But the average rate of growth is maintained by a succession of new rapidly-growing sectors with a new set of leading sectors. The proportion of the population engaged in agriculture and other rural pursuits decline, and the structure of the country's foreign trade undergoes a radical change.

✓ • Stage of Mass consumption :- In this stage of development per capita income of country rises to such a high level that consumption basket of the people increases beyond food, clothing and shelter to articles of comforts and luxuries on a mass scale. Further with progressive industrialisation and urbanisation of the economy values of people change in favour of more consumption of luxuries and high styles of living.

→ These model are generally referred to as Ak models, because they result in a production function of the form $y = Ak$ with $A = \text{constant}$.

→ The Ak model is actually considered the first version of endogenous growth theory.

→ Frankel developed the Ak model.

→ The Frankel model showed a constant savings rate, whereas Romer developed an Ak model with intertemporal consumer maximization.

→ The first version of endogenous growth theory was Ak theory, which did not make an explicit distinction between capital accumulation and technological progress.

In effect it lumped together the physical and human capital. An early version of Ak theory was produced by Frankel who argued that the aggregate production ~~cost~~ function can exhibit a constant or even increasing marginal product of capital.

This is because, when firms accumulate more capital, some of that increased capital will be the intellectual capital that creates technological progress, and this technological progress will offset the tendency for the marginal product of capital to diminish.

→ In the special case where marginal product of capital is exactly constant, aggregate output y is proportional to the aggregate stock of capital k :

19. Harris Todaro Migration Model

- John R. Harris and Michael P. Todaro presented this model of migration in 1970.
- This model is used in development economics and welfare economics to explain some of the issues concerning rural-urban migration.
- The main assumption of the model is that the migration decision is based on expected wage differential between rural and urban areas rather than actual wage differentials.
- In this model an equilibrium is reached when the expected wage in urban areas is equal to the marginal product of an agricultural labourer.

The model assumes that unemployment is non-existent in the rural agricultural sector. It is also assumed that rural agricultural production and the subsequent labour market is perfect competitive.

Steps to Equilibrium :-

- Rural ^{to} urban migration causes overcrowding and unemployment in cities as migration rates exceed urban job creation rates. Many individuals end up with unproductive or underproductive employment in the informal sector.

The main problem is that sustained economic development requires the creation and expansion of soc. which in turn requires huge amount of investment lumpiness of capital.

② Indivisibility of demand :- Most of underdeveloped countries suffer from ~~all~~ small size of market low purchasing power and per capita income of people. The indivisibility of demand is necessary implies a high level of investment in complimentary industries for an target without which the development process fails.

③ Indivisibility of saving :- From the concept of vicious circle of poverty it is clear that underdeveloped countries suffer from low level saving due to low level of income. This is possible only huge investment over wide range of industries fertilize more income which will raise level of savings.

→ Big push theory - must need for the plant industrialization of underdeveloped countries where agriculture is the dominant sector which is backward ridden to the poverty.



Challenges. Problems.

- poverty.
- political instability between nations, that occurs due to conflicts.
- unemployment.
- Building institutions that follow strong governance.
- climate change.

Over increasing and inefficient use of resources has knock-on effects including climate change, loss of biodiversity, pollution, poor health and poverty. These issues are interlinked and in turn often exacerbate each other.

Policies.

The Survey cites current government of India policies in direction of achieving SDGs.

• The Namami Gange Mission :- Major components include sewerage project management, urban & rural sanitation, tackling industrial pollution, water use efficiency and quality improvement.

• National Clean Air Programme :- in 2019 as a pan India time bound national level strategy for prevention, control and abatement of air pollution besides augmenting the air quality monitoring network across the country.

Assumptions.

- There are constant returns to scale assumed in this model.
- Technical progress is absent in the neoclassical growth model.
- Capital and labour are perfectly substitutable and factors of production are paid according to the value of their marginal products.
- There is perfect flexibility of wages, prices and interest rates.
- The capital-output ratio θ is an endogenous model.

The basic Neoclassical growth model shows that an economy will move towards a long run equilibrium capital-labour ratio at which output per head is also in equilibrium. In this stage, variables like output, capital, and labour all grow at the same rate. The model predicts long run growth model equilibrium at the natural rate.



Deepa B

Roll NO = 34

Economics

First Semester B. Com Degree Examination, January 2022
Sree Narayana College, Alathur
First Internal Test
BCM1B01 – Business Management

Total Marks: - 30 marks

Total Time: - 1 hour

SECTION – A

Answer all questions, each question carries 2 marks.

1. What is MBM?
2. What is meant by PODSCORB ?
3. State any leadership traits
4. What is meant by forecasting

(2 * 4 = 8
marks)

SECTION – B

Answer all questions, each question carries 6 marks.

5. Distinguish between formal & informal organization.
6. What is meant by motivation? Briefly explain its relevance

marks)

(6 * 2 = 12
marks)

SECTION – C

Answer the question, question carries 10 marks.

7. What is meant by planning. Briefly explain the barriers of effective planning.

marks)

(10 * 1 = 10
marks)



Thanking you 🙏

R. Rishi

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

16 / 30

1) Management by Motivation (MBM)

Management by Motivation is the main factor in every organisation. ~~From~~ Motivation which means stimulating people to action to accomplish desired work.

Motivation is the process attempting to influence others to do their works through possibility of gain or rewards. Management by Motivation is managers and top levels motivate people to achieve their organisational objective. Motivate employees for good decision making in a firm. ~~A Decision making employ~~ Top levels managers include employees for ~~desi~~ good decision making to achieve objectives in the organisation.

- 2) Planning, organising, staffing, coordination, Reporting, Budget.

6) Motivation.

Edwin B. Flippo defines "motivation" is a process attempting to influence others to do their work through the possibility of gain or reward.

According to G. Scott, "motivation means a process stimulating people to action to accomplish desired goal."



→ It is a continuous process. Man is full of wants, needs and desires. So, ~~man~~ ^{he} wants to full fill these wants. In the ~~process~~ ^{want} one is satisfied and another wants is arises. That means human wants cannot be satisfied at one time. The innumerable wants induce an individual to do work.

→ It is a psychological phenomenon :- Motivation is a psychological phenomenon. Man is full of wants, expectation, confidence & objectives.

→ It is dynamic :- The wants of a man may be today's motive today may be different to motives of tomorrow. Motives of an individual is different from other person.

→ Based on Motive :- Motivation helps to motivate people in the organisation. Motives helps an individual to confidence of himself.

→ Motivation is achieve helps to achieving objectives in the organisation. Managers, Top levels and managers motivate workers to achieve this organisational goals.

3) Leadership traits

Leadership traits means a good qualification, communication between workers, behavior and good behaviours to others. Leadership traits are classified difference form:

→ Personal traits : leader organisation wants to good leader for department in a firm. Quality of a good leader is good communication with employees, skill, knowledge about the organisations etc...
Leader is good for motivate and good decision making and motive employees for the achieve organisational goals.



→ Leader may work hard for achieving of the firm.

R. Binu
Principal
Sree Narayana College
Alathur - 678

7) Planning

Planning is the first step or stage in the firm for achieving its organisational goals. Planning is concerned with thinking before doing and deciding in advance.

Planning is thinking in advance, what is to be done.

Planning is a process is defined as the what is to be done, how is to be done, when it is to be done and who is to be done.

Barriers effect the planning through decision making of managers in the organisation.

- Personal barrier: An individual may plane not work at correct time. Managers give employees to achieve organisational goals, the workers may not work in correct process.
- Workers not hear the top-levels orders and decisions. It may effect in the goals of the organisation.



R. Binu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

First semester M.com PG Internal Examination Jan 2021

Corporate Governance

Time: 1 Hour

Weightage: 20

1. Briefly explain Employees and corporate Governance
2. What are the Principles of Corporate Governance
3. What are the SEBI Guidance towards Investors and shareholders
4. Explain the role of Shareholder in corporate Governance

(Total Weightage= 5*4=20)



Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

124
20

- 1. Explain employees and corporate governance.
- 2. Briefly explain principles of C.G.
- 3. What are SEBI guidelines for corporate investors and shareholders.
- 4. Explain role of shareholder in C.G.

3/1 B

Principles of corporate governance

1. Principles of accountability

In a business, management is accountable to the board and the board of directors are accountable to the shareholders.

2. Principles of fairness

Every persons in the organisation should be treated and fair and give equal importance.

3. Principles of equity

All the stakeholders should be treated equally.

4. Principle of transparency

Corporate governance should be transparent and should disclose all the relevant information related to the company to the shareholders.



Reducing Principles

The board of directors are the people who is liable to manage the company on behalf of shareholders. They should maximize wealth of shareholders.

6. PRINCIPLE OF INDEPENDENCE

Every employees should given proper freedom and independence to do their work.

7. PRINCIPLES OF CONFIDENTIALITY

8. PRINCIPLES OF DISCIPLINE

9. PRINCIPLES OF RESPONSIBILITY 10. PRINCIPLES OF SOCIAL RESPONSIBILITY

4) Shareholders are the owners of the company. The main objective of corporate governance is to improve the wealth of shareholders. Shareholders play less role in the activities of the company. The board of directors do all the activities for the shareholder.

Shareholders rights

1. Voting rights
Every shareholders has an important right to vote at the various meetings.

2. Right to inspect
Shareholders can have a right to inspect the documents and reports of the company.

3. Right to transfer ownership
The shareholder can transfer shares to any person and handover his ownership.

6. Based on ethics

Corporate Governance is a concept which based on ethics. Ethics simply mean what is right or wrong. Business ethics should be maintained by the board of directors and stakeholders. They should also be ethical.

7. Management

Management is the art of getting things done through others.

All the employees in the organisation should be directed and controlled by the managers.

8. Power and influence

The managers should use their powers and authority's properly and they can influence the employees and use them efficiently to achieve organisational goals and objectives.

Employees are the key elements of the organisation. Without them an organisation cannot survive and the efficiency and talents of the employees will contribute to the success of the organisation.



Based on the

3,

SEBI Guidelines

- * Right to receive share certificate.
- * Right to receive share certificate.
- * Right to inspect the minutes books.
- * The dividend should be declared on the basis of SEBI guidelines.
- * Voting rights.



A. Binu
Principal
Sree Narayana College, Alathur
Palakkad - 676 682, Kerala



Sree Narayana College, Alathur
Palakkad - 676 682, Kerala

4.0 Right to information

Shareholders have a right to get all the relevant informations regarding the matters of the company.

5.2 Right to dividend

Shareholders has the right to get dividend from the company.

6. Right to get copies of Financial Statements

Shareholders can collect the copies of Profit and Loss account and balance sheet.

7. Appointment of auditors

Shareholders can appoint the auditor to check the arithmetical accuracy of the financial accounts.

8. Shareholders can appoint directors



Shareholders can appoint directors to manage and operate the business. The board of directors work for them and increase the profitability and wealth of the shareholders.

DUTIES OF SHAREHOLDERS

- * Shareholders can change structure of the company
- * They has a duty to inspect financial statements

* Winding up of the company can done voluntarily.

1) Corporate Governance is a system by which business organisations are directed and controlled in order to achieve the organisational goals.

Features or characteristics of Corporate Governance

1. Systematic

2. Universal application

Corporate Governance is a concept that can be used by companies all over world.

3. Transparency

The board of directors should disclose all financial information regarding the company to the shareholders and employees.

4. Accountability

The board of directors and employees are always accountable or answerable to the shareholders always.

5. Increase shareholders wealth


The main objective of Corporate Governance is to increase the wealth of shareholders and the all the employees and the board of directors to achieve these goals.

SREE NARAYANA COLLEGE, ALATHUR
FIRST SEMESTER M.COM INTERNAL MARKS
M.COM

Subject : Corporate Governance

SL NO	NAME OF THE STUDENT	Grade
1	ABDUL SHABIR	A
2	ANISHA B	A
3	ANOOP T A	B
4	ANSAR A	D
5	ANUPAMA T A	B
6	ARYA A	B
7	ARYA PRAKASH	B
8	ARYA S	A
9	ATHUL C	B
10	DIVYA U	A
11	FILBY T A	B
12	GEETHU K	A
13	JESHMA C	A
14	JITHIN K S	A
15	MAYA M	B
16	MONISHA S	A
17	SABITHA S	A
18	SHIJI R	A
19	SNEHABABU	A
20	SREELAKSHMI K S	A
21	SUBIN S	B
22	VISMAYA R	B




Principal
Sree Narayana College, Alathur
Palakkad - 678 682, Kerala

**SREE NARAYANA COLLEGE ALATHUR
DEPARTMENT OF ENGLISH
INTERNAL EXAMINATION SEPTEMBER 2022**

FIFTH SEMESTER II A FUNCTIONAL ENGLISH

FEN5B07 – TRANSLATION STUDIES

Time: One Hour

Maximum 20 Marks

I Answer any two of the following in a paragraph each.

1. Chaucer's contribution as a translator.
2. Dryden as a translation theorist.
3. Explain any two barriers to the translation of a prose text.
4. Eugene Nida
5. The six rules laid down by Hillaire Belloc for the translation of a prose text.
6. Peter Newmark

(5 x 2 = 10 marks)

II Write an essay of about 300 words on any one of the following:

7. Write an essay on the major approaches to translation.
8. Is a prose text easy to translate when compared to a poem? Justify your answer.
9. What are the problems involved in translating poetry?

(1 x 10 = 10 marks)



9.22 FEN5 B07 TRANSLATION STUDIES

I. Any 2 in a paragraph. (5 x 2 = 10)

1. Chaucer's contribution as a translator.
2. Dryden as a translation theorist.
3. Explain any 2 barriers to the translation of a prose text.
4. Eugene Nida.
5. The 6 rules laid by Hilmaire Bellor for the translation of a prose.
6. Peter Newmark.

II. Write an essay on any one of the following

7. Write an essay on the major approaches to translation.
8. Is a prose text easy to translate when compared to a poem.
9. What are the problems involved in translating poetry.

ANSWERS

8. Susan Brissot says that the wide spread notion "it is easier to translate prose than a poem" is wrong. She says that translating is a novel. Her complication is complex as it is to the poem. She also says that the organization of a novel and a short story may be simple but the translation of the same may not be simple. The wide spread notion that the translation of a novel is simple comes from the fact that

The translator simply opens the SL text and begins work without beginning without considering how the opening section relates to the structure of the whole work. But the total structure of the translation of novel is important as it is to the poem. The total effect created by a novel depends upon the systematic unfolding of events and incidents in a correct manner. The translator here is forced to read the text should make a thorough reading of the SL text so as to make his own evaluation of the character and incidents before he starts with the ^{work of} translation. If the translator considers sentences in ^{of} personally ^{specific} content alone, the outcome will result in loss of dimension. This is what ^{proves} calls "Negative Shift". It will result in mistranslation of information and sub-interpretation of the original work.

3. Barriers of prose translation includes when coming to translate ecology, social culture, material culture, those terms cannot be translated as the weight of the expression may get lesser.



5.

6 rules set by Hillaire Belloe includes:

- ① "Blackout" by saying that he means that translation of prose does not use word by word rendering. ~~whereas~~ the translators should focus on sense by ~~using~~ by each section of the original work.
- ② Secondly, he believes in idiom by idiom translation ~~and~~ where the idiom should give used to provide sense. For example the Greek idiom "By dog" is to English as "By God".
- ③ He says that translation should consider intention by intention translation where the weight of an expression in a text should be appropriate to the text.
- ④ Belloe warns translators, ~~how~~ Amis by saying that some words / similar words cannot be used, as it may differ in meaning. For example, the Greek word "to demand" - means to ~~use~~ ask. "to demand" - means to order / ^{compel} demand.
- ⑤ Translator should transmute ~~the~~ ^{the} ~~original~~ ^{original} ~~work~~ ^{work} ~~by~~ ^{by} ~~his~~ ^{his} ~~own~~ ^{own} ~~personal~~ ^{personal} ~~views~~ ^{views} ~~or~~ ^{or} ~~creativity~~ ^{creativity} ~~of~~ ^{of} ~~the~~ ^{the} ~~original~~ ^{original} ~~work~~ ^{work} is not accepted.
- ⑥ Belloe says that the translator should never embellish or decorate the original work by his own personal views or creativity. ~~of~~ ^{of} ~~the~~ ^{the} ~~original~~ ^{original} ~~work~~ ^{work} is not accepted.

3. Barriers of prose translation
includes ecological, social culture, material culture, phonetic, non-verbal communication.

Social culture

This is the main barrier of translating a prose text because certain customs and rituals in a society differs completely in its names, practices and values. Thus the same words of such customs are being kept in translated text because not other word can take the place of the such words or phrases. Certain kinds of social languages of a society when translated to a text its essence gets disorted.

Material culture

This is also a great barrier of translation as certain materials such as our dress / costumes, then food items are termed vastly different from each of the society or nation. Hence, certain ways of clothing style too may be interpreted in a different way which may results in loss of its value or weight of such phrases / expression. Hence, sometimes translators use the same word as in Sh to the Th too.

FIFTH SEMESTER B.Sc BOTANY FIRST INTERNAL EXAM, SEPTEMBER 2021
BOTS5B 06- Gymnosperms, Paleobotany, Phytogeography and Evolution

Time : 2 hours

Max : 60 marks

Section -A

Answer at least eight questions

Each question carries 3 marks

1. Distinguish between manoxylic and pycnoxylic wood
2. Describe the coralloid root of Cycas .
3. Enumerate the fern characters of Cycas.
4. List out the xerophytic characters in Gymnosperms
5. Write down the objectives of Paleobotany
6. Write a note on Birbal Sahni institute and its significance in paleobotany
7. Differentiate the morphology of sporophyte of Lepidodendron and Rhynia
8. Explain the theory of land bridges
9. Describe the features of ovule of Pinus
10. Explain the theory of land bridges
11. What is endemism
12. What are the consequences of glaciation

Section.B

Answer at least five questions

Each question carries 5 marks

13. Give an detailed account of pinus needle and its xerophytic characters
14. Mention why gymnosperms act as a connecting link between Pteridophytes and angiosperms
15. Describe Geological time scale
16. Define different types of fossils
17. Explain Migration
18. Write a note on Oparin theory
19. Explain the features of Western Himalayas

Section C

Answer any one question

Each question carries 11 marks

20. Comparative the anatomy of Cycas leaflet and Pinus needle with suitable diagrams
21. Explain various theories of origin and evolution

Principal

**Sree Narayana College, Alathur
Palakkad- 678 682, Kerala**



1. Monoxyle wood

- It is non-composite wood, xylem fibres form a cambial ring which is monoxyletic.
- parenchyma cell with more starch grains.
- Seen in cycas.

Pyroxyle wood

- It is strong composite wood, numerous xylem fibres form a hardened wood. it is used as timber-wood.
- less starch grains occur.
- Seen in pinus.

2. Coralloid root of cycas

In cycas, the coralloid root are seen in surface of soil, it is vertically upward growing root. In coralloid root bacteria occur such as

Anabaena or blue green algae. so it is called algal zone. The function of algae is not clear. But the function of blue green algae is nitrogen fixation and respiration. It is also help for absorption and anchorage of water and mineral nutrients. Nenticels are present.

3. Feather characters of cycas

In cycas, the stem is terans and subterans and strong spherical dichotomously pinnately compound leaves, which is covers by strong base, with dichotomously compound leaves with cover by small leaves. It is like pinnately compound and fern-like leaves over the tip of the stem. Stem is unbranched. But in some cases, the

should be affected by some injury or decay. At that place the stem becomes branched.

5. Objectives of paleobotany

In paleobotany, there are two subdivisions they are botanical and geological.

In botanical:-

Study of External and internal structure of fossil plants and their distribution

→ Correlation of paleoclimatics with distribution of plants

In geological:-

→ Determination of age of rocks.

→ Geographical of coal and water

6. Birbal Sahni Institute

Birbal Sahni Institute of paleobotany (BSIP), Lucknow

is the research centre of India. First this is known as 'Institute of paleobotany' in 1946.

The office of the institute is held by Dept. of botany at Lucknow university. In 1948, the Government of University donate a bungalow and 3.5 acre of land for the institute. So the formal BSIP came on 1949. Its Director is Dr. Birbal Sahni after the death 1969, his wife Savitri Sahni the Director. The foundation stone is provided by the prime minister Pandit Jawaharlal Nehru for the building.

BSIP is currently organized for oil India institute, Botanical research institute, paleobotanica research survey. etc.



- To the correction of climatic aspect.
- For the paleobotany for paleobotanicals research in botanical and geological studies.

8. Land bridges

- It is the interconnection of continents by a land-bridge.
- By the connection of continents, exchange of plant and animal species. It leads to the distribution of the species.
- When the land-bridges sink deep to the sea, exchange of species is discontinued.

Now the land-bridges is modified, the land-bridges (is) never sink to sea but it will float over the sea.

- It is divided into three types
1. Corridor
 2. Filter bridges
 3. Sweepstick bridges.

9. Ovule of pinus

In pinus, the ovule is oval and orthotropous. The outermost layer of ovule with protoplast is called nucellus. The nucellus is diploid megaspore mother cell. The inner most layer is integument, which is the protective part of the ovule. Micropyle is the part of the ovule seen in the tip of the apex. The nucellus, diploid mother cell undergo mitotic division and form four haploid megaspore mother cell. In this three mother cells are degenerate and the remaining one

mother cell are function.

11. Endemism

Endemism or endemic is defined as the plant or group of plant species occurs in a particular area, where else it never seen in the whole world. that means, the particular type of species only seen in a particular area, and it never seen in any other places.

12. Structure of foliage leaves (needle)

The structure of foliage leaves is differentiated into epidermis, hypodermis, mesophyll, Endoderm pericycle, vascular cylinder.

A. Epidermis:

Epidermis is the outermost layer of the leaves, which is single layer and it is thin walled, & it is cuticularised. In leaves, sunken hypochloric stomata is present. In stomata, 2 guard cell and 2 subsidiary cell is present.

b) Hypodermis:

After the Epidermis, Hypodermis is occurs. 1-4 layer of compactly arranged parenchymatous layer is occurs. In it, intercellular space is occurs and it is filled by tannis, resins etc.



c) Mesophyll

After the Hypodermis, mesophyll is occurs in this leaves. Mesophyll cell is not differentiated into spongy and palisade. The leaves is helps for respiration and absorption of water and mineral nutrients. It is parenchymatous layer.

d) Endodermis:

Endodermis is the innermost layer. It is compactly arranged parenchymatous layer and it is thick walled.

e) pericycle:

It is layer after the Endodermis, 2-3 layer of compactly arranged parenchyma layer. which protect the vascular cylinder.

f) vascular cylinder

xylem towards the centre and phloem towards the periphery. xylem is composed of xylem fibres and vessels. xylem parenchyma is absent. phloem is composed of phloem fibres. companion cell is absent.

15) Geological time Scale

Geological time scale is the history of earth. It is calendar of earth's history. It is the time period before 4500-6000 millions years ago. In Geological time scale, it is designed in time units.

Time scale is divided into two, time and earth's stratification. According to time, it is divided into 4 hierarchy are eons, era, period and epoch. Stratification is also divided into 4, they are stage, series, etc.

Geological time scale is divided into 4 ^{era} they are. Archaean, paleozoic, Mesozoic, and Cenozoic.

a) Archaean era

In this era, the formation of origin of earth and the primitive origin of life is held on this era. Cyanobacteria, bacteria etc are formed in this era.

b) paleozoic era

In this era, the formation of mild climate and inland sea in this invertebrate origin of fishes, amphibians, and reptiles are occur it is known as 'age of amphibians'.

c. Mesozoic era:

Mesozoic era is the formation of cyclozooids. So it is known as 'age of cycloid'.

d. Cenozoic era

It is the era in which the formation of modern species.

12) Glaciation

Glaciation is the melting of ice on the upper surface. It should make the sea level to increase.



16) Types of Fossils

a) compression fossils.

→ It is the buried type of plants. Due to the compression or pressure the plants external structure occurs on the segment. Such as stone, sand, mud etc. In this, it is used for the morphological studies. In this internal structure is not obtained, external structure is seen.

b) petrification:-

→ It is the fossil plants, in which the external and internal structure occurs. Organic parts are seen in the fossil. Petrification is very rare. For this fossil, Benzoid acid, calcium, magnesium etc are used for the internal organ structure.

c) Impression incrustation or

in incrustation, the external structure of the fossil fuel is cast, the internal structure is totally destroyed.

d) Impression

→ It is a type of compression. It is given compression or vertical pressure. By using this, the external structure is easily obtained. It is only for the venation of leaves.

e) mummified fossil.

→ Through this, organic parts of the leaves is occur, and the external structure also.

f) coal ball

→ In this fossil, some chemical are used such as calcium carbonate, iron sulphate, magnesium etc.

For the formation of the organic parts.

G. Amber

It is a type of remains from the fossiliferous tree, it is obtained by injury or decay. And the full body of the fossil is can be seen.

h) leaf coal

It is also type of coal, in which the external & internal structure is occur.

i) Actual remains

It is the remains of the fossil, it is extracted by in low temperature and absence of air. It gives the full details of the fossil.

17) Migration

Migration is a type of transfer of plant species. In migration, the transfer of plant species to other area occurs through the migruals such as spores, fruit, seed, gemule propagules etc. Migration of plant species to other area by the dispersal and distribution of the spores, fruit etc. By the transfer of species to other place, the species is spreading over the newly places.

Migration are three type of barriers.

1. Environmental barriers

2. Biotic barriers

3. Geographical barriers.

→ Environmental barriers

In Environmental barriers, the main condition is the climate. i.e., when the climate of locality



changes, the species are become so tolerant to overcome the change. So they will migrate to other places. Some agents are also occur such as wind, water, insects etc are the barriers to transfer the species to other places. In this, some species are strongly stand on it place, some loosely standing species are easily migrate to other places.

→ Biotic barrier.

In biotic barrier, the transfer of plant species is done by animals. When the animal ^{feed} eat the plants and dispersal and distribution is done by them. In biotic barrier animals, insects also may act as barriers.

→ Geographical barrier

In Geographic barrier, the transfer of plant species is occur path through the continents. In that, oceans play the main role to transfer the species to other continents. Angiosperms in the islands transfer to other is done by the oceans.

A) Western Himalayas

The region include Kashmir, Kasmir, and part of Punjab. It is the northern part of our country is bounded in Himalayan region. Its climate and vegetation in tropical level is low altitudes, at arctic level is high altitudes. The annual rainfall of this region is 100 to 200 cm. Snowfall is occur during winter season. It is subdivided into three

- a) lower region
 - b) Temperate zone
 - c) Alpine zone
- or
Submontane zone.

1) Lower region / submontane zone

→ It includes the outer Himalaya, Siwalik and the adjoining region. The annual rainfall is 150 cm. In this region, timber trees are common. The common tree is *Shorea robusta*. Sal tree is replaced by deciduous plants.

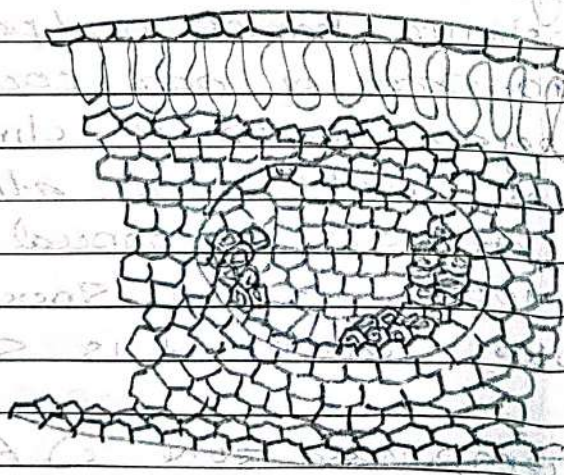
2) Temperate zone

→ Oaks are the dominant. *Pinus*, *Pinus*, *Abies* etc are found in heavy rainfall region (between 1600 to 1800 m). Herbs are commonly seen in this region. *Rhynchospora*, *Acacia*, etc are seen. In cultivated dry land in Punjab - such as wheat, barley etc. In western Himalaya, Kashmir, the cultivated crops are rice, saffron, almond, walnut etc.

3) Alpine zone

→ In this zone, shrubby trees are commonly seen in the lower Alpine zone. *Rhododendron*, *Acacia*, etc are seen. At about 5000 m, permanent snowfall occurs, this leads to the plant growth to nil. So it is known as snow line / ice line.

20) Cycas leaflet





In cycas, the leaflets is differentiate into epidermis, cortex and ~~vascular cylinder~~ ^{vascular cylinder} ~~vascular cylinder~~ ^{vascular cylinder}. Endodermis.

The epidermis is the outermost layers of the leaves. It is a single layer which is cuticunised. Stoma is present, two guard cell and two subsidiary cell are occur.

Cortex is layer after the epidermis. It is divided into two layers outer and inner layer. outer most layer is compactly arranged parenchymatous layer and thick walled is known as hypodermis. the inner layer is loosely arranged parenchymatous.

~~stoma~~ ^{sucker} haplochele stoma is present. leaf is differentiate into spongy and palisade layers.

Spongy is spirally thickening and tannins is deposited in the intercellular space. palisade is scodi scabi form thickening and deposition of tannins, resins, mucilage etc are filled in the intercellular space.

vascular cylinder ~~in~~ which xylem and phloem is present. xylem is composed of xylem tracheides, vessels etc. phloem is composed of phloem parenchyma

pinus needle.

Epidermis: Epidermis is the outermost layers of the leaves, which is single-layered and thick cuticunised. sucker haplochele stoma is present.

Hypodermis Hypodermis are occur in the layers of compactly arranged parenchyma.

Mesophyll Mesophyll, it is not differentiate into spongy and palisade.

5/10

d) Endodermis

Endodermis is the innermost layer. It is compactly arranged parenchymatous layer and thick walled

• pericycle

is the layer after endodermis, 2-3 layers are occur.

• vascular cylinder

xylem is occur and it is composed of xylem tracheid, vessels. xylem parenchyma is absent.

phloem is composed of phloem fibres. companion cell is absent.

4) Gymnosperms

→ it is sporophytic plant it is differentiated into stem, leaves, root

→ it is heterosporous. male and female cone is present

→ some male gamete is motile and flagellate.

→ ovule and seed is naked.

F) Sporophyte of Rynia.

→ it is have only a primary roots and it is short

some adventitious branches are formed from the primary root. rhizome are also seen. it is

elongate, sessile and deep to the soil. it have only mid veins, lateral vein is absent.

Sporophyte of Lepidodendron.

→ the trunk have leaf scars and strobilus.

leaf scar is occur due to injury or decay.

the tip of it is like a crown. the stem is short and Bra Bark are seen over it.

III semester Internal Examination Question Paper

PAPER: Immunology [ZOL3C07]

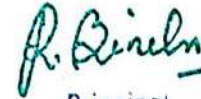
Academic Year [2021-2022]

Total Marks: 30

Time: 1 hr

Answer the following questions

1. Differentiate between antibody affinity and avidity (2)
2. What are Immunoglobulins. Describe the structure of immunoglobulin (8)
3. Mention different classes of immunoglobulins, with brief note on its presence in different body fluids. (5)
4. Write note on different mechanism involved in Antibody diversity (15)



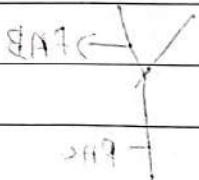
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

1. What are immunoglobulins? Describe the structure of immunoglobulin. (8 mark)
2. Mention different classes of immunoglobulin. Def with brief note on its in different body fluids (5)
3. Write note on diff mechanisms involved in antibody diversity (10)
4. Differentiate b/w antibody Affinity & antibody avidity (2)

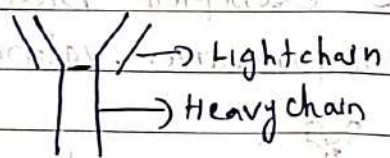
Answers:

1. Immunoglobulins are antibodies that are produced in the body when antigens enter our body. It help to fight against antigen.
 - There are various types of immunoglobulins IgD, IgE, IgF, IgA and IgM
 - IgA is called as serum. IgM is the most common type of antibody.

Structure of



An antibody is composed of two chains; heavy chain and light chain.



- They are joined by a Disulphide bonds
- Hinge joint which connects two heavy chain is also composed of Disulphide bond.
- Hinge joint is a Flexible joint which help in changing the position of antibody, helps in antigen interaction.

Monomer - ex:- IgD, IgE and IgG

Dimer - ex: IgA

Pentamer :- IgM

2. Classes of Immunoglobins

There are various classes of Immunoglobins.

IgD, IgE, IgG, IgA, IgM.

IgM

- IgM is present as Monomer or Dimer.
- It includes subclasses IgA, IgB, IgC
- 75% is its constituent

IgG

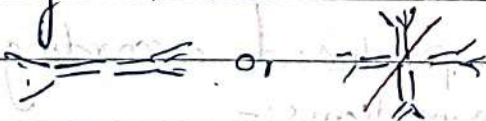
- IgG is a monomer.
- It has a valency 2



- It consist of subclasses - IgGA, IgGB, IgGC, IgGD, IgGE
- It consist of 5 subclasses
- except C all can help in blood plasma transfusion

IgA

- IgA exist as a monomer and Dimer
- valency can be 2 or 4



- It consist of 2 subclassed - IgA1 and IgA2
- It is also called as secretin

- Genetic rearrangement theory is the most accepted one.

- There are genes which encode for particular proteins. Their rearrangement brings variations in antibodies.

- Antibody consists of a variable region & a constant region.

- Change in ~~variable~~ variable region consists of various segments such as V, D, J, etc. Their different combinations bring about diversity in antibody.

Light chain - is encoded by κ , gamma genes, lambda genes.

- ~~Att~~ κ , λ , μ - All are present in different chromosomes, in chr 22, 2 and 14 respectively.

Light chain consists of V, J and C segments.

It does not consist of D.

Heavy chain - It consists of V, D, J and C segments. Their different combinations bring about variations.

Different mechanisms involved in antibody diversity are:-

- 1) ^{Compatibility of} Combination of light & heavy chain
- 2) Nucleotide addition
- 3) Nucleotide addition
- 4) Flexibility of Fc chain
- 5) Somatic hypermutation
- 6) Translation
- 7) Transcription

Transcription

- The process of synthesizing RNA from a DNA template is called transcription.
 - It is catalyzed by RNA polymerase.
 - The DNA double helix unwinds to form a transcription bubble.
 - The template strand is used to synthesize the complementary RNA strand.

- The RNA strand is synthesized in the 5' to 3' direction.
 - The DNA double helix re-anneals after transcription is complete.

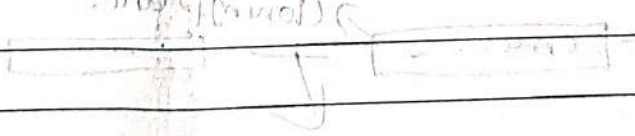
Transcription - an overview

After transcription is complete, the RNA transcript is released from the DNA template. The RNA transcript is then processed into a mature mRNA molecule.

16/30

- The RNA transcript is processed into a mature mRNA molecule.
 - The mature mRNA molecule is then translated into a protein.

- The first fragment has the first 3 bases of the constant and the second portion of the constant.



There is a variable space between the two fragments. The first fragment helps in translation.

46 copy

FIFTH SEMESTER BSc MICROBIOLOGY (CBCSS UG) DEGREE EXAMINATION

MEDICAL MICROBIOLOGY I

Time: 2 1/2HRS

Marks: 80 MARKS

SECTION A

Answer all questions (10X 3 =30 MARKS)

1. Name the infection in which the source of pathogen is host's own body
2. Expand TSST and explain
3. Give examples for a bacterial and viral pandemic
4. MLD
5. ID50
6. Epizootic and enzootic diseases
7. Causative agent of Syphilis
8. Define infection
9. Quellung Reaction
10. CNP

SECTION B

Answer any 5 questions (5X 6 =30 MARKS)

11. Explain on different types of infection
12. Normal flora of human body
13. Methods of transmission of infection
14. Endotoxins and exotoxins
15. Laboratory diagnosis of Gonococci
16. Pathogenicity of Pneumococci

SECTION C

Answer any 2 questions (2X 10 =20 MARKS)

17. Explain the infections caused by any two Gram positive pyogenic cocci
18. Describe on the morphology, cultural characteristics, biochemical properties, pathogenicity, laboratory diagnosis and prevention of gonorrhoea
19. Factors predisposing to microbial pathogenicity



ALAUSMBO06, Darshana R

51 1/2 1
80

Section A

2. Toxic shock Syndrome Toxin.

- It is produced by the effect of toxic shock syndrome.

- It is one of the toxin produced by *Staphylococcus aureus*.

4. MLD - Minimum Lethal Dose

Minimum number of bacteria required to produce clinical evidences of infection or death in an susceptible animal under suitable conditions.

5. ID50 - Infection dose 50.

It is the dose required to kill 50 percent of organisms.

6. Epizotic disease is the outbreak of disease;

large number of cases in a population whereas enzootic disease is the lower number of cases in the population.

8. Infection is the lodgement and multiplication of parasites in the host organism.

Infection are categorized into many, they are Primary infection, Re-infection, Secondary infection, Focal infection, Cross infection, Nosocomial infection, ~~Exoto~~ Exogenous and endogenous.

Based on clinical characteristics, they are classified as Latent infection, Atypical infection and Acarrier infection.

9. Quellung Reaction is the swelling ^{reaction} when pathogens enters. Biochemical properties of *Streptococcus*

✓ Pneumonia includes agglutination, precipitation and the Quellung Reaction as well.

1. Reinfection:

✓ It is the infection in which ~~infection~~ it starts with the parasite which is already present in host. It is the parasite which has lower resistivity compared to other.

3. Bacterial pandemic - Fever caused by the bacterias. Cholera, ~~etc~~ Bacterimia etc.

✓ Viral - Disease caused by the Influenza virus.

7. Syphilis (*gonorrhoea*)
✓ *Syphilis gonococci* is the causative agent of Syphilis. It is under focal infection.

Section - B

11. Infection is the lodgment and multiplication of parasite in the host.

Infection are of different types :-

1. Primary Infection - It is initial infection caused by the parasite in the host's body.

2. Reinfection - It is caused by the same parasite which has lower resistivity.

3. Secondary infection - Caused by the parasite in the another host's body.

4. Focal infection is the infection occurs in a specialized region or local region. eg: Syphilis.

✓ 5. Cross infection is the infection in which ~~has~~ patient is already affected by an infection again it is affect and infected by other.

✓ 6. Nosocomial infection is caused from the hospitals. ^{conial} ~~conial~~ _{ogenic}

7. Iatrogenic infection occurs or infected from the



ALAU5MB006, Darshana R.

physician.

Based on the environment, infection may be classified as endogenous and exogenous.

Based on clinical measures, infections are :-
Atypical and Acclinal and latent infection.

Atypical infections are not typical; Acclinal represents the not good clinical measures.

Latent refers to the hidden infection.

12. Normal flora is the organisms which are useful for our body. Normal flora is divided into two; Resident and Transient.

Resident is the constant population which cannot be removed permanently and later it is change in time to time.

Transient may be pathogenic or non-pathogenic. Sometimes:

Vitamin K, B etc produced in our body helps to produce during conditions it required.

Normal flora of skin

In skin, normally all type of organisms are present. It depends on our habitat, job, environment etc.

Organisms present on face, neck may be pathogenic staphylococci, streptococci are present.

Normal flora of conjunctiva

No organisms are present because of the flushing action of tears. Main organisms present in conjunctiva are diphtheroids, staphylococci.

Normal flora of nose

In the infants nose is sterile at the time of birth
It gets commensal flora and pathogenic flora
from the mother within 2-3 days.

Normal flora of mouth

Organisms present on the esophageal line is
taken up during swallowing

In mouth, breast feeding child has lactobacilli,
Staphylococci etc.

Normal flora in blood, tissues

Organisms present in the mouth, nose etc will
present in the blood and tissue.

13. Transmission of infection occurs through contact,
ingestion, Inoculation, Congenital and ~~injection~~ ^{inhalation} etc

Infection gets transmitted through contact.

Direct and indirect contacts are there.

Direct contact is through touch etc.

Indirect contact is through fomites.

Inhalation is the another method of transmission.
Large drops when fallen down, when it
contains viable organisms it gets inhaled.

Ingestion is through the food we taken.

Inoculation is the vaccinations that are
inoculated into our body.

Rabies etc.

Congenital is the direct contact with the foetus
by crossing the placenta. It may cause still birth
Sometimes it may even lead to abortion known
as vertical selection.



ALAU5MBO06, Darshana R

14. ~~Exotoxins~~ are the heat labile proteins produced or dispersed out of the medium. Usually ~~exotoxins~~ occurs in Gram-positive bacteria. They are also seen in gram-negative bacteria as well.

Endotoxins are the heat stable (LPS) lipopolysaccharides produced into the medium. Present in gram-negative bacteria mainly. They are also seen in gram positive bacteria.

15. ~~Gonococci~~ Specimens collected from the gonococci is transported quickly in ~~to~~ to the laboratory. Specimens are viewed using stain in the microscope. After that the viewed specimen is made into culturing at a temperature suitable to the Gonococci in a suitable medium in a suitable environment.

Section - c

~~17. Gram positive Cocci are Staphylococcus aureus and Staphylococcus~~

18. Morphology :- Gram negative diplococci, non-motile and non sporing, they are capsulated. They are delicate organisms, arranged in pairs.

* Cultural characteristics - They grow in the enriched blood agar and chocolate agar, small colonies concave in shape.

* Biochemical properties - They are catalases. They produce toxins.

* Pathogenicity - Through sexual Contact. Present in males and in females.

#

* Laboratory diagnosis - Specimens are collected from the gonococci is transported quickly into the laboratory and viewed under microscope. After that viewed specimen is cultured at a suitable temperature in a suitable environment.

* Prevention is by using antibiotics. Antibiotics should be taken with the medical advice, they should be taken in a particular time in specific conditions. Taking of more antibiotics leads to the problems like diarrhoea.

19. There are numerous factors predisposing to microbial pathogenicity. They are:- Adhesion, Invasiveness, toxigenicity.

- Adhesion is the attachment into tissue and membrane.

- Invasiveness is the spreading in the tissue, the one which gets attached.

- Toxigenicity produces the toxins such as endotoxin as well exotoxins.

Exotoxins are heat labile proteins produced or dispersed out of the medium. Usually exotoxins are

produced in gram positive bacteria they are also seen in gram negative as well in small amounts.

Endotoxins are the heat stable (LPS) Lipopolysaccharides produced into the medium. They are present in gram-negative bacteria mainly.

They are also seen in gram positive bacteria.

SREE NARAYANA COLLEGE, ALATHUR
SECOND SEMESTER B. Sc. DEGREE INTERNAL EXAMINATION MARCH 2022
(UG-CBCSS) Chemistry
CHE2C02T; Complementary Course II: PHYSICAL CHEMISTRY

Section A (One word)

Answer all questions. Each question carries 1 mark

1. The velocity possessed by maximum number of molecules of a gas at given temperature is _____
2. The SI unit of van der Waals constant 'b' is _____
3. For an ideal gas, the compressibility factor is _____
4. According to kinetic molecular theory of gases all molecular collisions are _____
5. Real gases deviates from ideal behaviour at ___ temperature and ___ pressure.
6. The SI unit of surface tension is _____
7. Viscosity of a liquid _____ with increase in temperature
8. The vapour pressure of a liquid _____ with increase in temperature.
9. The Property of resistance to flow is called _____
10. The _____ of a liquid is the temperature at which its vapour pressure becomes equal to 1 atmosphere.

Section B (Short answer)

Answer any seven questions. Each question carries 2 marks

11. What is Boyle temperature?
12. What is RMS velocity?
13. What is Dalton's law of partial pressure?
14. Calculate the average velocity of CO molecules at STP
15. Distinguish between ideal and real gas.
16. How does vapour pressure of a liquid vary with increase in temperature?
17. What is reverse osmosis?
18. What is surface tension? Write its unit in SI system?
19. What is fluidity?
20. State Charles-van't Hoff law?

Section C (Paragraph)

Answer any four questions. Each question carries 5 marks

21. Discuss Maxwell's distribution of molecular velocities.
22. Calculate the temperature at which the RMS velocity of nitrogen equals that of CO₂ at 300K.
23. What are the causes for the deviations of real gases from ideal behaviour?
24. Derive the van't Hoff osmotic pressure equation?
25. State and explain laws of osmotic pressure.
26. Explain Berkeley and Hartley's method?

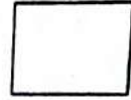
Section D (Essay) Answer any one question.

Each question carries 10 marks

27. Discuss kinetic molecular theory of gases . Derive the expression for RMS velocity and Kinetic energy of gases molecules from kinetic gas equation.
28. Discuss the deviations of real gases from Boyle's law and Charles' laws.
29. Discuss the dependence of the vapour pressure of liquids on intermolecular attractive forces and on temperature.
30. State and explain Henry's law. What are its limitations? Discuss its applications.



Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala



KAVITHA N

U916

8 → LDPE - Low Density Poly Ethylene.

* Ethylene $\xrightarrow[\text{polymerisation}]{\text{Addition}}$ Polyethylene.

Polyethylene $\xrightarrow[\text{polymerisation}]{\text{condensation}}$ low density poly ethylene.

- * Low molecular weight.
- * Low tensile strength.
- * Low durability.

→ HDPE - High Density Poly ethylene.

* Ethylene $\xrightarrow[\text{polymerisation}]{\text{Addition}}$ Polyethylene.

Polyethylene $\xrightarrow[\text{Petroleum}]{\text{Intense heat}}$ HDPE.

- * High molecular weight
- * High durability
- * High tensile strength.

11. Bulk polymerisation →

* Mass polymerisation.

* The components of bulk polymerisation is monomer and an initiator.

* Bulk polymerisation takes place in absence of a solvent

SREE NARAYANA COLLEGE ALATHUR
FIFTH SEMESTER B.Sc. DEGREE MODEL EXAMINATION
(CBCSS-UG)2021-22

Environment and Water Management
EWM5B05T-EARTH SCIENCES

Time Two Hours and a Half

Maximum: 80 marks

Section A

(Answer at least ten questions,
Each question carries 3marks,
All questions can be attended,
Overall Ceiling 30)

- 1 Define the terms –Mass and binding energy.
 - 2 What is radioactive decay?
 - 3 Write a short note on Electromagnetic Spectrum
 - 4 Explain the different types of plate boundaries
 - 5 Write any two characteristics of aerial photography
 - 6 Explain Mohr's Scale of hardness
 - 7 Explain physical properties of feldspar group of minerals
 - 8 Differentiate color and streak of a mineral
 - 9 State one continental theory
 - 10 Explain Frost action
 - 11 Explain Nebular Hypothesis
 - 12 How will you distinguish feldspar and quartz?
 - 13 What are the sources of information about the interior of earth?
 - 14 Explain Rock cycle
 - 15 Lithosphere and Asthenosphere
- (10 x 3=30 marks)



A. Bineta
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

Section B

(Answer at least **five** questions,
Each question carries 6 marks,
All questions can be attended,
Overall Ceiling 30)

- 11 Explain the types of rocks based on the mode of formation
- 12 Explain the physical properties of minerals
- 13 Give an account of continental drift hypothesis illustrating various evidences in favor of it
- 14 What are the Applications of remote sensing?
- 15 Explain the principle involved in the working of i) Atom Bomb ii) Hydrogen Bomb
- 16 Write a short note on common ore forming and rock forming minerals
- 17 Explain plate boundaries and its impacts
- 18 What are Radioactive series?

(5 x 6 = 30 marks)

Section C

(Answer any 2 questions,
Each question carries 10 marks)

- 18 What are Applications of GIS in Environmental Studies?
- 19 Explain different layers of earth and its composition
- 20 Give an account of weathering and its types
- 21 What is global climate change? How does it affect the environment?

(2 x 10 = 20 marks)



P. Binu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala



Name of the candidate : KRIPA SUNNY

Roll No. 24 Dept. BSc. EWM Date 24/12/2018

Name of the examination Vth Semester Degree model Exam 2018

Subject EWM 5B-05 - Earth science.

Marks

63/80

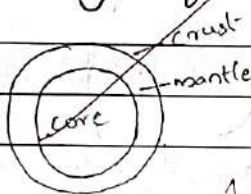
PART-A.

1. fault is the readjustment of or uplift of land mass.

2. Weathering is the breakdown of rock particles into smaller and transmitted through water, wind, ice, etc.

- Weathering are of three types of substances
- Physical weathering.
 - Chemical weathering
 - Biological weathering.

3. Core is the inner most layer of internal earth. Core is the iron rich layer.



4. Hypocentric point is the point where earthquakes originate. It is also called as focus point.

5. Asteroids are the combination of dust and gas particles in the space. Each have its own angular velocity and momentum. It make them rotate like a disc shape in orbit. It eject large mass during rotation. This is called asteroids.

6. Physical weathering is the breakdown of rock or sediments or (particles) into smaller ones by some physical processes - like wind, water, ice, etc. When water continuously fill in the crack and freeze. It split during wind or pressure.

7. Nebular Hypothesis

8. Surface waves



Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

10. Cloud seeding is the alteration of weather for more precipitation

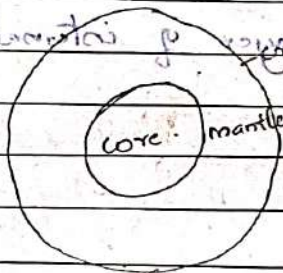
6. Mean is the average

21. Internal Structure of earth is mainly composed of three layers.

→ Crust.

→ Mantle.

→ Core.



Crust is the thin layer of the outermost layer. Crust is the thin layer of the outermost layer.

• Crust is the thin layer of the outermost layer.

most layer.

Rocks are mainly formed in the crustal layer.

Seismic waves originate in this layer.

Crust are of two types: continental and oceanic.

Continental crust is thicker and oceanic crust is thinner.

→ continental.

Oceanic is extrusive magmatic rocks formation. (Basalt)

Continental is intrusive magmatic rocks (Granite)

Mantle is the layer between crust and core.

• The layer between crust and core.

• The layer which distinguishes the upper mantle is called Moho.





Mantle is divided into inner mantle and outer mantle.

Plate tectonics are primarily originate from mantle.

Core is the inner most layer of earth.

- Core is an iron rich layer.

These layers are classified based on its

mechanical composition.

Based on mechanical strength, earth is divided into five layers :-

→ Lithosphere

→ Mesosphere

→ Asthenosphere

→ Outer core

→ Inner core

Rocks are naturally occurring solid masses or aggregate of minerals or mineraloids. Rocks are mainly formed in crustal layer of earth. The study of rocks are called petrology. Important branch is geology.

Rocks are mainly classified into three based on its physical properties like permeability, texture, particles, physical & chemical composition, etc.

→ Igneous Rocks

→ Sedimentary rocks

→ Metamorphic rocks



Principal
Sree Narayana College, Alathur II
Palakkad-678 682, Kerala

Igneous rocks

The magma or lava cool and solidify to form igneous rocks. This magma is derived from the partial melting of pre-existing rocks by increase in temperature, decrease in pressure or change in its composition.

Igneous rocks are again classified into two:-

→ Plutonic or intrusive.

Intrusive mafic rock which formed by slowly cool and crystallization of magma or lava.
eg: Granite.

→ Volcanic or extrusive.

The rapid cooling and solidification forms volcanic rocks.

eg: Basalt.

• Crust is made plenty of igneous rocks about 64.7% is filled with this rocks.

Sedimentary rocks

Rocks are formed mainly by accumulation and cementation of clastic sediments, minerals and small microorganisms. The pre-existing rocks' sediments or fragments accumulate and cement by itself (welding of clastic sediments or hardening).

• Before deposit, the sediments or fragments of already weathered rocks is transmitted through wind, water, ice, etc.

• It accumulate in different layers.
eg: hematite, gypsum, magnetite.

Metamorphic rocks

Metamorphic rocks are mainly formed from igneous rocks, sedimentary rocks or even from older metamorphic rocks.

• This process is called as metamorphism.



the term means change in form.
 • The original rock called protolith is transferred to one mineral type to another mineral type or different forms of same mineral type.

Based on its formation mechanism, metamorphic rocks is divided into three:-

→ contact metamorphism
 • occurs at low temperature but high heat the surrounding rocks. The temperature is dominated in this type.

→ Pressure metamorphism
 • Pressure is dominated in this case. It occurs in deep ground. So it is called as burial metamorphism.

→ Regional metamorphism
 • In this case temperature and pressure plays equal role. It mainly occurs in mountain building regions.

Based on its structure, it is divided into two:-

→ Foliated
 When it poses multiple textures.

→ Non-foliated
 When it poses simple texture.

eg: Jade

24. Orogenesis is the process of formation of mountains. Mountains are the area of land that is raised abruptly from the surrounding area.

Mountains are mainly formed due to volcanic disruption of tectonic plates. The evolution of mountain includes:-
 • Sediments volcanic sediments.
 • The sediments or fragments



of volcanic materials.
 It is mainly of two types:-
 * Sediments from the sedimentary rocks.

P. Binu

*) Igneous rocks formation ^{under} it cools & solidification.

→ Crustal upliftment

The crustal layer is uplifted due to the continental drifts or tectonic plate movement.

→ Crustal upliftment by isostatic rebounding or faulting.

It includes the readjustment of land. It leads to crustal upliftment.

Based on its formation, mountains are of four types:-

→ Fold mountains

Formed by the folding of crustal rocks. It is the younger rocks formation. eg Himalaya, Andes & Atlas mountains.

→ Block mountains

This line or ridge is displaced between two tectonic plates its movement causes compression and forms block mountains.

eg: Rhine rift valleys, Black forest mountains

→ Volcanic mountains

Formed by the accumulation of sediments during volcanic eruptions.

eg: Kaparitan Island

→ Residual mountains

The upper part of rocks is weathered and removed. The remaining part is formed residual.

eg: Aravalli hills, Nilgiris



Principal
Sree Narayana College, Alathur
Palakkad-678 002, Kerala



25. Seismology is the study of seismic waves. Seismic waves are the line between two tectonic plates, breaks during its movement or energy is transferred to upper side create seismic waves. from the point where earthquake, The sudden release of energy into the surface produce seismic waves, it create earthquake. Focus point is the point where earthquake is original it is also called as hypocentric point. The another terms related to earthquake is epicentric. The point which is accurately above the focus point.

• Seismic waves are of two types:-

→ Body waves

→ Surface waves

Body waves

The waves which passes through the layers of earth. It is fastest than surface waves.

Body waves is divided into two

→ P wave

→ S wave

Primary wave.	Secondary wave.
→ P wave is faster than S wave.	→ It give is slow compared to p wave.
→ P wave hits the seismograph first.	→ It hit the seismograph second.
→ Animals can feel the p wave.	

Principal
Sree Narayana College, Alathur
Palakkad. 678 582, Kerala

Seismograph is the device used to detect the seismic waves.

Surface Waves

Surface waves is posed only through the surface of the crust.

Surface waves the responsible for most of the destructive forcing of the earth quakes.

Based on its movement, surface waves are of two types:

- Love wave
- Rayleigh wave.

Love wave	Rayleigh wave
→ A. E. H. Love invented this wave.	→ Williams, Donald and Rayleigh invented this wave.
→ Love wave moves through the surface as side to side.	→ Rayleigh waves wave through the surface ground.
→ It is completely horizontal.	→ It rolls like waves in sea.

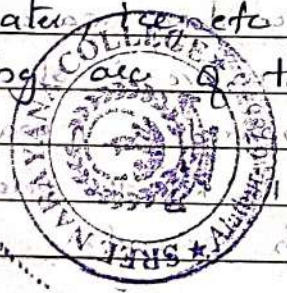
27. Weathering is the breakdown of rock particles into smaller ones so that it can transmit through wind, water, ice, etc.

Weathering are of three types:

- Physical weathering
- Chemical weathering.
- Biological weathering.

Physical weathering.

Physical weathering is breakdown of rock particles through physical process or properties like wind, water, ice, etc.





• When the water is continuously present in the gap or crack of rocks becomes freeze after some time. It causes the expansion of the rock. It causes weathering.

• When the composition of rocks is another physical force. Due to its action, the rocks will become change in its composition. It is not easily weathered by wind.

Chemical weathering

• The breakdown of rocks are mainly due to its chemical composition and chemical properties.

• The chemical composition of rocks affect the rock more. It change its form or mineral type.

It reduces its mechanical strength. It can be weathered more easily.

Biological weathering

• The break down of rocks into smaller ones with the help of microorganisms.

• The rocks are composed of minerals, microorganisms and clastic sediments.

• The action of microorganisms lead to weathering.

• By erosion or organic weathering process, the weathered.



A. Binu
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

PART - D:

Q1 There are many theories pertaining earth's origin. It is mainly classified as early theories and modern theories.

Early theories:

→ Gaseous mass theory:

This theory was put forward by Immanuel Kant in 1755. According to this theory, there is a gaseous mass called Nebula. It has higher angular velocity. It forms a hypocaustic force. It gradually leads to the formation of concentric rings. By the course of time, the concentric ring forms planets and satellites.

Drawback:

→ It explains, angular velocity is directly proportional to the mass of the object, but in real case, sun rotates slower than earth but sun has more mass than earth.

→ Nebular hypothesis:

This theory was put forward by Laplace. According to this theory, there is a hot cloud called Nebula. It has higher velocity and rotation. Due to this higher velocity, the concentric ring is removed from the inner part. By the course of time, the concentric ring forms planets and satellites.

• This is most accepted theory.

Drawback:

→ It could not explain the path of planets move.



R. Binu
Principal
Sree Narayana College, Alathur
Alakkad - 678 682, Kerala



→ Planetary theory.

This theory was put forward by Chamberlain and Moulton.

According to this theory, there is a sun and a companion star. The companion star pulls out some mass from the sun. The sun ejects some mass when the star moves away from the sun. This mass is called planetary. By it forms planets and satellites.

Drawback.

→ It could not explain from where the mass comes from.

→ Tidal theory.

This theory was put forward by Jean and Jeffery.

According to this theory, there is a sun and an intruding star. When the star moves from the sun, it ejects a cigar-shaped mass called tide. It will directly form planets and satellites.

Modern theories.

→ Interstellar dust gas theory. This theory was put forward by Otto Schmidt.

According to this theory, the space is filled with dust and gas particles. These particles have its own angular velocity and momentum. So it moves together in a disc shaped pathway. It gradually include in orbits. Other part is

forms planets. It have some small masses. The particles moves in orbit, eject a large mass called asteroids. This asteroids and small masses together



→ Steady state theory
According to this theory, the density and velocity will not change in any forces. It remains as steady-state manner.

→ Electromagnetic theory
This theory says that earth originate due to electromagnetic force. The space contains masses and all combined due to the EMF (electromagnetic force). By the course of time, planets and satellites are formed.

→ Dust gas cloud theory
According to this theory, earth space is filled with dust, gas and clouds. The dust and gas particles have its own velocity and momentum. It leads to rotate together in same path. Then they hit the cloud, eject some small masses. It leads to the formation of planets and satellites.

There are four early theories and seven modern theories.

In this only one early theory and one modern theory is mostly acceptable.

31. Environment suitable for them. Only in that time, they can do its activities. But, due to anthropogenic activities, the climate is changed and it affect environment badly. It is



Principal
Sree Narayana College, Alathur
Palakkad - 678 682

Transform.

Actually this movement the plate moves side to side in different direction.

The convergent collisions are of three types:

- continent - oceanic collision.
- Oceanic - oceanic collision.
- continent - continent collision.

PART-B.

12. Trade wind are the wind that blows towards the North eastern side South western side is called trade wind.

13. During day time the land is hot and sea is cold. At night the temperature inversion is happen and land become cold. The And the breeze flow from sea to land is called land breeze.

14. The wind flow from west to North east is called westerly wind.

15. Plutons are the intrusive mafic rock of igneous rocks which forms slowly by cool and crystallization eg: Granite

16. Mafic

18. Tidal theory is put forward by Jean and Jeffery. According to this theory there is a Sun and a companion star. When the com star moves away



R. Binil

Principal
Sri Narayana College, Atathur
Palakkad - 678 682, Kerala

from the sun, it eject a gas shaped mass called
☑ tide. It directly form planets and satellites.

19. → It could not explain the size of planets.
→ it could not explain that path of sun rotates
☑ slower than earth but it have more mass.

20. Angular velocity is the rate of rotation at an
instant of time.

PART-B

Principal
Sree Narayana College, Alathur
Patakkad-678 682, Kerala



DEPARTMENT OF COMMERCE

Seminar ASSIGNMENT SUBMISSION LIST 2021-22.

FOURTH SEMESTER BCOM- BANKING AND INSURANCE

SL.NO	NAME	ASSIGNMENT-TOPICS
1	AADHISH T J	Introduction to banking: meaning and definition ,origin and development of banking
2	ABHISHEK P MURALI	customer of a bank
3	ABIN J	structure of banking in india
4	ADITH S	banks and economic development
5	ADHITHYA G	functions of commercial banks
6	ADHITHYA M	central bank
7	AKASH J	RBI -functions
8	AKSHAYA K	emerging trends in banking
9	AMISHA K	negotiable instruments: definition and characteristics
10	ANASWARA R	types , parties to negotiable instruments
11	ANILA PAULOSE	cheque- types of cheques
12	ANJANA B	crossing of cheques
13	ANJANA P P	draft, cheque vs draft
14	ANWAR SHEREEF A	endorsement , significance
15	ARYA R	regularity of endorsement
16	ARYA SUN IL	liability of endorser
17	ASWAN RAJ R	electronic payments
18	BABY K	e banking: centralized online real time electronic banking (core)
19	BHAVIKA B	ECS
20	CHARUTHA K K	electronic fund transfer
21	DINU R	RTGS
22	DIVYA K	NEFT
23	GAYATHRI B	SWIFT
24	GOPIKA G	E cheque
25	GOPIKA R	any time , atm.s
26	JINI R	credit card, debit card, smart card
27	JYOTHIKA K	internet banking
28	KAIRALI K K	mobile banking
	KEERTHI K	tele banking
	KIRAN S	financial inclusion
	MAHIMA M	recent initiatives in financial inclusion

P. Bineta

Principal

Sree Narayana College, Alathur
Palakkad-678 682, Kerala



32	MEGHA K	introduction to insurance: concept ,need of insurance
33	MEGHA M	insurance as a social security tool
34	MINI G	insurance and economic development
35	NANDHANA R	principles of insurance
36	NANDHANA G	various kinds of insurance
37	NAVAMI P V	life and general insurance
38	NEETHU P M	features
39	NEHA S	life insurance vs general insurance
40	NITHA PRASAD	life insurance
41	POOJA S	law relating to life insurance
42	PUNYA S	general principles
43	RADHIKA S	proposal policy
44	RENCHANA R	assignment and nomination
45	RESHMA V	title and claims
46	RESMI B	general insurance
47	SAFNA K	law relating to general insurance
48	SANDEEP C	IRDA
49	SANDHYA S	powers and functions
50	SHIFA HUSSAIN K	insurance business in india
51	SHIHANA P S	Introduction to banking: meaning and definition
52	SHINSINA U	origin and development of banking
53	SREEVIDHYA T S	draft
54	SRUTHI M	cheque vs draft
55	SUJEEV N	introduction to insurance: concept
56	SUJISHA S	need of insurance
57	SWAPNA C	e banking
58	THEJAS S	centralized online real time electronic banking (core)
59	UNNIMAYA A	credit card
60	VINEESH S	debit card
61	VISMAYA M	smart card
62	VISMAYA R	any time
63	VIVEK R	atm.s

R. Binu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

DEPARTMENT OF COMMERCE
ASSIGNMENT SUBMISSION LIST 2021-22

FOURTH SEMESTER B.COM-BANKING AND INSURANCE

SL NO.	NAME	ASSIGNMENT TOPICS
1	Aadhisht.T.J	BANKS AND ECONOMIC DEVELOPMENT
2	Abhishek P Murali	BANKS AND ECONOMIC DEVELOPMENT
3	Abin J	BANKS AND ECONOMIC DEVELOPMENT
4	Adith S	BANKS AND ECONOMIC DEVELOPMENT
5	Adithya G	BANKS AND ECONOMIC DEVELOPMENT
6	Adhithya M	BANKS AND ECONOMIC DEVELOPMENT
7	Akash J	BANKS AND ECONOMIC DEVELOPMENT
8	Akshaya K	BANKS AND ECONOMIC DEVELOPMENT
9	Amisha K	BANKS AND ECONOMIC DEVELOPMENT
10	Anaswara R	BANKS AND ECONOMIC DEVELOPMENT
11	Anila Poullose	BANKS AND ECONOMIC DEVELOPMENT
12	Anjana B	BANKS AND ECONOMIC DEVELOPMENT
13	Anjana P P	BANKS AND ECONOMIC DEVELOPMENT
14	Anwar Shereef A	BANKS AND ECONOMIC DEVELOPMENT
15	Arya R	BANKS AND ECONOMIC DEVELOPMENT
16	Arya Sunil	BANKS AND ECONOMIC DEVELOPMENT
17	Aswanraj R	BANKS AND ECONOMIC DEVELOPMENT
18	Baby K	BANKS AND ECONOMIC DEVELOPMENT
19	Bavika B	BANKS AND ECONOMIC DEVELOPMENT
20	Charutha K K	BANKS AND ECONOMIC DEVELOPMENT
21	Dinu R	BANKS AND ECONOMIC DEVELOPMENT
22	Divya K	BANKS AND ECONOMIC DEVELOPMENT
23	Gayathri B	BANKS AND ECONOMIC DEVELOPMENT
24	Gopika G	BANKS AND ECONOMIC DEVELOPMENT
25	Gopika R	BANKS AND ECONOMIC DEVELOPMENT
26	Jini R	BANKS AND ECONOMIC DEVELOPMENT
27	Jyothika K	BANKS AND ECONOMIC DEVELOPMENT
28	Kairali K K	BANKS AND ECONOMIC DEVELOPMENT
29	Keerthi K	BANKS AND ECONOMIC DEVELOPMENT
30	Kiran S	BANKS AND ECONOMIC DEVELOPMENT
31	Mahima M	BANKS AND ECONOMIC DEVELOPMENT
32	Megha K	BANKS AND ECONOMIC DEVELOPMENT
33	Megha M	BANKS AND ECONOMIC DEVELOPMENT
34	Mini G	BANKS AND ECONOMIC DEVELOPMENT
35	Nandhana R	BANKS AND ECONOMIC DEVELOPMENT
36	Nandhana G	BANKS AND ECONOMIC DEVELOPMENT
37	Navami P B	BANKS AND ECONOMIC DEVELOPMENT
38	Neethu P M	BANKS AND ECONOMIC DEVELOPMENT
39	Neha S	BANKS AND ECONOMIC DEVELOPMENT
40	Nitha Prasad	BANKS AND ECONOMIC DEVELOPMENT
41	Pooja S	BANKS AND ECONOMIC DEVELOPMENT
42	Punya s	BANKS AND ECONOMIC DEVELOPMENT
43	Radhika s	BANKS AND ECONOMIC DEVELOPMENT



R. Binu
Principal
Sree Narayana College, Alathur
Palakkad- 678 682 Kerala

44	Ranchena R	BANKS AND ECONOMIC DEVELOPMENT
45	Reshma V	BANKS AND ECONOMIC DEVELOPMENT
46	Reshmi B	BANKS AND ECONOMIC DEVELOPMENT
47	Safna k	BANKS AND ECONOMIC DEVELOPMENT
48	Sandeep C	BANKS AND ECONOMIC DEVELOPMENT
49	Sandhya S	BANKS AND ECONOMIC DEVELOPMENT
50	Shifa Hussain K	BANKS AND ECONOMIC DEVELOPMENT
51	Shihana P S	BANKS AND ECONOMIC DEVELOPMENT
52	Shinsina U	BANKS AND ECONOMIC DEVELOPMENT
53	Sreevidhya T S	BANKS AND ECONOMIC DEVELOPMENT
54	Sruthy M	BANKS AND ECONOMIC DEVELOPMENT
55	Sujeev N	BANKS AND ECONOMIC DEVELOPMENT
56	Sujisha S	BANKS AND ECONOMIC DEVELOPMENT
57	Swapna C	BANKS AND ECONOMIC DEVELOPMENT
58	Tejas S	BANKS AND ECONOMIC DEVELOPMENT
59	Unnimaya A	BANKS AND ECONOMIC DEVELOPMENT
60	Vineesh S	BANKS AND ECONOMIC DEVELOPMENT
61	Vismaya M	BANKS AND ECONOMIC DEVELOPMENT
62	Vismaya R	BANKS AND ECONOMIC DEVELOPMENT
63	Vivek R	BANKS AND ECONOMIC DEVELOPMENT



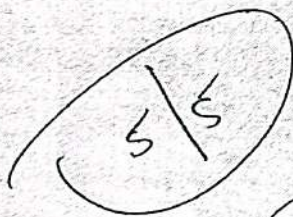
P. Bireba

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

REAL ANALYSIS

SEMINAR REPORT

SUB: ABSOLUTE AND CONDITIONAL CONVERGENCE
OF IMPROPER INTEGRALS



~~DE~~ DEVADAS.V.
Assistant Professor
Department of Mathematics
Sree Narayana College, Alathur

P. Dinela
Principal
Sree Narayana College, Alathur
Pattakkad - 678 602, Kerala

Submitted by,
Neethu. R
U340
Bsc. Mathematics

Absolute and Conditional convergence of Improper integrals

Absolutely convergence of 1st kind

An improper integral of 1st kind $\int_a^{\infty} f(x) dx$ is absolutely convergent iff if $\int_a^b f(x) dx$ is convergent.

Conditional convergence of 1st kind

An improper integral of 1st kind $\int_a^{\infty} f(x) dx$ is conditionally convergent if

(i) $\int_a^{\infty} f(x) dx$ is convergent

(ii) $\int_a^{\infty} |f(x)| dx$ is divergent.

Theorem

If $\int_a^{\infty} f(x) dx$ is absolutely convergent then it is convergent.

Proof

Suppose that $\int_a^{\infty} f(x) dx$ is absolutely convergent.

$\Rightarrow \int_a^{\infty} |f(x)| dx$ is convergent.

But we know that $f(x) \leq |f(x)| \quad \forall x > a$

$\Rightarrow 0 \leq f(x) \leq |f(x)| \leq 2|f(x)| \quad \forall x \geq a$

Since $\int_a^\infty 2|f(x)| dx = 2 \int_a^\infty |f(x)| dx$ is convergent

Then by direct comparison test

$\int_0^\infty (f(x) + |f(x)|) dx$ is convergent

But $f(x) = f(x) + |f(x)| - |f(x)|$

and $\int_a^b f(x) + |f(x)| dx$ and $\int_a^\infty |f(x)| dx$ convergent

$\Rightarrow \int_a^\infty f(x) dx = \int_a^\infty (f(x) + |f(x)|) dx - \int_a^\infty |f(x)| dx$ is convergent

Hence the proof

P19 : P.T $\int_1^\infty \left(\frac{\cos x}{x^2+1} \right) dx$ converges

Let $f(x) = \frac{\cos x}{x^2+1}$

$\Rightarrow 0 \leq |f(x)| = \frac{|\cos x|}{x^2+1} \leq \frac{1}{x^2+1} \leq \frac{1}{x^2} = g(x)$ &

Since $\int_1^\infty \frac{1}{x^2} dx$ is convergent (by p-integral

$\int_1^\infty \frac{1}{x^p} dx$ is convergent for $p > 1$ and is divergent for $p \leq 1$)

Then by direct comparison test $\int_1^\infty |f(x)| dx$ is convergent

$\Rightarrow \int_1^\infty f(x) dx$ is absolutely convergent

$\Rightarrow \int_1^\infty f(x) dx$ is convergent

$\int_{\pi}^{\infty} \frac{\sin x}{x} dx$ is conditionally convergent.

Proof

consider $\lim_{b \rightarrow \infty} \int_{\pi}^b \frac{\sin x}{x} dx = \lim_{b \rightarrow \infty} \left\{ \left[\frac{1}{2} x - \cos x \right]_{\pi}^b - \int_{\pi}^b \left(\frac{-1}{x^2} \right) x - \cos x dx \right\}$

$$= \lim_{b \rightarrow \infty} \left[-\frac{\cos b}{b} + \frac{\cos \pi}{\pi} - \int_{\pi}^b \frac{\cos x}{x^2} dx \right]$$

$$= 0 - \frac{1}{\pi} - \lim_{b \rightarrow \infty} \int_{\pi}^b \frac{\cos x}{x^2} dx.$$

Since $\lim_{b \rightarrow \infty} \int_{\pi}^b \frac{\cos x}{x^2} dx$ is absolutely convergent

$$\Rightarrow \int_{\pi}^{\infty} \frac{\sin x}{x} dx \text{ is convergent}$$

consider $\int_{\pi}^{\infty} \left| \frac{\sin x}{x} \right| dx \quad \forall m \in \mathbb{N}$

$$\int_{\pi}^{m\pi} \left| \frac{\sin x}{x} \right| dx = \int_{\pi}^{2\pi} \left| \frac{\sin x}{x} \right| dx + \int_{2\pi}^{3\pi} \left| \frac{\sin x}{x} \right| dx + \dots + \int_{(m-1)\pi}^{m\pi} \left| \frac{\sin x}{x} \right| dx.$$

$$= \sum_{n=1}^{m-1} \int_{n\pi}^{(n+1)\pi} \left| \frac{\sin x}{x} \right| dx.$$

But $|m| \leq (n+1)\pi, \quad \forall x \in [n\pi, (n+1)\pi]$

$$\Rightarrow \frac{1}{m} \geq \frac{1}{(n+1)\pi} \quad \forall x \in [n\pi, (n+1)\pi]$$

$$\begin{aligned}
\Rightarrow \int_{\pi}^{m\pi} \left| \frac{\sin n\pi}{n} \right| dn &= \sum_{n=1}^{m-1} \int_{n\pi}^{(n+1)\pi} \left| \frac{\sin n\pi}{(n+1)\pi} \right| dn \\
&= \frac{1}{\pi} \sum_{n=1}^{m-1} \frac{1}{(n+1)} \int_{n\pi}^{(n+1)\pi} |\sin n\pi| dn \\
&= \frac{1}{\pi} \sum_{n=1}^{m-1} \frac{1}{n+1} \int_0^{\pi} |\sin(u+n\pi)| du \\
&= \frac{1}{\pi} \sum_{n=1}^{\infty} \frac{1}{n+1} \int_0^{\pi} |\sin u| du \\
&= \frac{1}{\pi} \sum_{n=1}^{m-1} \frac{1}{n+1} \int_0^{\pi} \sin u du \\
&= \frac{1}{\pi} \sum_{n=1}^{m-1} \frac{1}{n+1} [-\cos u]_0^{\pi} \\
&= \frac{1}{\pi} \sum_{n=1}^{m-1} \frac{1}{n+1} - \cos \pi - \cos 0 \\
&= \frac{1}{\pi} \sum_{n=1}^{m-1} \frac{1}{n+1} \times 2 \\
&= \frac{2}{\pi} \sum_{n=1}^{m-1} \frac{1}{n+1} \\
&= \frac{2}{\pi} \sum_{n=2}^m \frac{1}{n}
\end{aligned}$$

Since $\sum_{n=1}^{\infty} \frac{1}{n}$ is divergent

$$\Rightarrow \lim_{m \rightarrow \infty} \int_{\pi}^m \left| \frac{\sin n\pi}{n} \right| dn = \infty \text{ divergent}$$

Hence $\int_{\pi}^{\infty} \frac{\sin n\pi}{n} dn$ conditionally convergent

Sree Narayana College Alathur
Department of English

ENG103 History of English Language

First semester M A ENGLISH ... November 2021

Seminar and Assignment Submission

Sl No	Register No	Name	Seminar	Assignment	Signature
1	ALAVMEG001	Abhitha K Vinod	Impact of Norman Conquest	Latin and Greek influence	Ai
2	ALAVMEG002	Akshaya S	Scandinavian invasion	Dialects of English	Aksh
3	ALAVMEG003	Archana S	Bible Translations	The rise of Englishes	Asha
4	ALAVMEG004	Arya P	Semantic changes	Sound changes in English	Arya
5	ALAVMEG005	Aswathy C V	Middle English Literature	Loan words	Aswathy
6	ALAVMEG006	Binimol B	Pidgin and Creoles	Attempts to reform English spelling	Binimol
7	ALAVMEG007	Devika E S	English in the digital age	Germanic family of language	Devika
8	ALAVMEG008	Drishya S	Englishes in India	Semantics	Drishya
9	ALAVMEG009	Gopika G	Impact of renaissance	Evolution of standard English	Gopika
10	ALAVMEG010	Kalavathy K	Modern English period	Expansion of vocabulary	Kalavathy
11	ALAVMEG011	Malavika U	Impact of science and technology	English in the post colonial world	Malavika
12	ALAVMEG012	Sajna J	Old English Period	Impact of Norman Conquest	Sajna
13	ALAVMEG013	Shini Balan	Great vowel shift	Pidgins and Creoles	Shini
14	ALAVMEG014	Sneha M G	Colonialism and English language	Middle English period	Sneha
15	ALAVMEG015	Sreelaya K	Attempts to reform English spelling	Old English Period	Sreelaya
16	ALAVMEG016	Surabhi P	Indo European family of language	Impact of science and technology	Surabhi
17	ALAVMEG017	Varsha G	Expansion of vocabulary	English as the global language	Varsha
18	ALAVMEG018	Athul T	Evolution of standard English	Colonialism and English language	Athul

R. Binil
Principal
Sree Narayana College Alathur
Palakkad-678 682, Kerala

ENG1101 British Literature from Chaucer to
18th Century

Sree Narayana College Alathur
Department of English

First semester M A ENGLISH ... November 2021...

Seminar and Assignment Submission

Sl No	Register No	Name	Seminar	Assignment	Signature
1	ALAVMEG001	Abhitha K Vinod	Duchess of Malbi as a Jacobean Tragedy	Use of Imagery in Canonization.	Abhitha
2	ALAVMEG002	Akshaya S	Macbeth as a mock heroic poem	universality of Gray's elegy	Akshaya
3	ALAVMEG003	Archana S	Grave digger scene in Hamlet	Picaresque element in Joseph Andrews	Archana
4	ALAVMEG004	Arya P	Rivals as a Antisentimental Comedy	Use of Satire in Gulliver's travel	Arya
5	ALAVMEG005	Aswathy C V	Political allegory in Gulliver's Travel	Bacon's prose style	Aswathy
6	ALAVMEG006	Binimol B	Character sketch of Mrs. Malaprop	Political allegory in Gulliver's travel	Binimol
7	ALAVMEG007	Devika E S	Importance of marriage in OF Marriage	Squire's characteristics in Canterbury tales	Devika
8	ALAVMEG008	Drishya S	Digressions in Joseph Andrews	Rivals as a anticentennial Comedy	Drishya
9	ALAVMEG009	Gopika G	Characteristics of Metaphysical Poets	Bacon's Prose style	Gopika
10	ALAVMEG010	Kalavathy K	Paradise lost as a product of Renaissance	Portrayal of religion in Robinson Crusoe	Kalavathy
11	ALAVMEG011	Malavika U	Role of faith in Duchess of Malfi	Feminism in this century	Malavika
12	ALAVMEG012	Sajna J	Use of Imagery in Canonization	Mock Heroic as a Mock Heroic poem	Sajna
13	ALAVMEG013	Shini Balan	Milton's Orand Style	Hamlet as a Shakespearean Tragedy	Shini
14	ALAVMEG014	Sneha M G	Canonization was a metaphysical poem	Milton's Use of Epic Similes	Sneha
15	ALAVMEG015	Sreelaya K	Treatment of death in Hamlet	Milton's Orand Style	Sreelaya
16	ALAVMEG016	Surabhi P	Use of Satire in Gulliver's travel	Portrait of the Knight in Chaucer's Prologue	Surabhi
17	ALAVMEG017	Varsha G	Satire as the hero of Paradise Lost	Mock Heroic as a dramatic monologue	Varsha
18	ALAVMEG018	Athul T	Rivals as a antisentimental comedy	Digressions in Joseph Andrews	Athul

R. Binil
Principal

Sree Narayana College, Alathur
Palakkad-678 682, Kerala



VIth Sem - Assignment Topics & Seminars.

- 1/ Akshaya - Abiotic & biotic factors of ecosystem ✓
- 2/ Anjali - Carbon cycle
- 3/ Danya KD - Nitrogen "
- 4/ Hridya - Phosphorus "
- 5/ Neeha - Adaptation in hydrophytes ✓
- 6/ Meha - " " xerophytes ✓
- 7/ Sandee - " " halophytes ✓
- 8/ Shruvany - " " epiphytes ✓
- 9/ Snehamol - " " parasites ✓
- 10/ Snehalakshmi - Air pollution ✓
- 11/ Sneha - Noise pollution ✓
- 12/ Dilyeth - Biosphere reserves ✓
- 13/ Mubinda - Ecological pyramids ✓
- 14/ Pranav - Sources of pollution
- 15/ Sneeth - Food chain & food web.
- 16/ Anja - Soil pollution ✓
- 17/ Dhruv vijaya - Thermal " ✓
- 18/ Dweya S - Noise " ✓
- 19/ Kuchnapu - Ecosystems - sea, estuaries
- 20/ Neethu K - Lentic ecosystems - lake, pond
- 21/ Neethu KM - Lotic ecosystems - river, forest, grassland
- 22/ Neethu kuchu - WWTWWF
- 23/ Salini - Lake Ecosystems - forest, grassland ✓
- 24/ Sneha - Acid rain, el-nino
- 25/ Parsha - Global warming & greenhouse gas ✓
- 26/ Adhar - Biomagnification, BOD
- 27/ Ajmal - IUCN
- 28/ Anurag - UNEP
- 29/ Anwarath - NIBPGP
- 30/ Rahul - Red data book.
- 31/ Richard - ex-situ conservation, Biodegradable & non-biodegradable pollutants
- 32/ Vaisul - KSBDB ✓
- 33/ Keerthi - in situ or ex situ ✓

PG DEPARTMENT OF ZOOLOGY, S N COLLEGE, ALATHUR
ALLOTMENT OF ASSIGNMENT TOPIC
[Academic Year 2021-2022]

Name of the Teacher: Dr. Lalitha R

Batch: (2020-2022) M.Sc Zoology [III semester]

Sl.No	Register No	Name of the Student	Assignment topic
1	ALAUMZL001	Aiswarya M	Immunology Paper [ZOL3C07] Vaccines - Active and passive immunization. Whole organism vaccines. Recombinant vector vaccines. DNA vaccines. Synthetic peptide vaccines. Multivalent vaccines.
2	ALAUMZL002	Ajay P	
3	ALAUMZL003	Apsara A R	
4	ALAUMZL004	Archana M S	
5	ALAUMZL005	Basil Abraham	
6	ALAUMZL006	Heera T	
7	ALAUMZL007	Radhu R	
8	ALAUMZL008	Rishika S	
9	ALAUMZL009	Vismaya B	



R. Binu
Principal
Sree Narayana College, Alathur
Palakkad - 678 682, Kerala

PG DEPARTMENT OF ZOOLOGY, S N COLLEGE, ALATHUR

Allotment of Seminar Topics

[Academic Year 2021-2022]

Name of the Teacher: Dr. Lalitha R

Batch: (2020-2022) M.Sc Zoology [III semester]

Sl.No	Register No	Name of the Student	Seminar topic
1	ALAUMZL001	Aiswarya M	Transplantation immunology- Auto graft, Allograft, Isograft and xenograft Immunological basis of graft rejection.
2	ALAUMZL002	Ajay P	Role of cell- mediated responses. Transplantation antigens. General immune suppressive therapy
3	ALAUMZL003	Apsara A R	Hypersensitivity Reactions. Allergens. IgE- mediated (type-I) hypersensitivity.
4	ALAUMZL004	Archana M S	Antibody- mediated cytotoxic (type- II) hypersensitivity. Immune complex-mediated (type- III) hypersensitivity.
5	ALAUMZL005	Basil Abraham	Immunity and malnutrition and immune deficiency diseases. Primary immune deficiency diseases. (a) Bruton's disease
6	ALAUMZL006	Heera T	Di-George syndrome & SCID- AIDS. Transmission of HIV, Vaccines to prevent AIDS.
7	ALAUMZL007	Radhu R	Antigen- processing and presentation- Exogenous and Endogenous pathways.
8	ALAUMZL008	Rishika S	Cytokines. Properties of cytokines. Cytokine antagonists. Cytokine secretion by TH1 and TH2-cells. lymphoid and myeloid cancers.
9	ALAUMZL009	Vismaya B	Cytokine related diseases. (a) Bacterial septic- shock (b) Chaga's disease



R. Binu

Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

SREE NARAYANA COLLEGE
DEPARTMENT OF MICROBIOLOGY
ASSIGNMENT AND SEMINAR 21-22
III BSC MICROBIOLOGY

S.No	NAME OF THE CANDIDATE	TOPIC OF SEMINAR/ASSIGNMENT
1	Afeefa Thasneem H	Innate Immunity
2	Amalu M George	Active Immunity
3	Amrithesh S	Passive Immunity
4	Anjaly P V	Antigens
5	Anjaly R	Classes of Antigens
6	Aparna K	Antibody
7	Aparna B	Hybridoma Technology
8	Athul S	Immunoglobulin G
9	Bhavya M	Immunoglobulin A
10	Haritha H	Immunoglobulin M
11	Jini Roy	Immunoglobulin D
12	Manasa R	Immunoglobulin E
13	Nandhakumar N	Autoimmune Disease –Introduction and types
14	Regha P R	Autoimmune Disease –pathogenesis
15	Reshma M	Ag-Ab reaction introduction
16	Aiswarya A	Precipitation
17	Anjana V	Agglutination
18	Arshakannan	Complement fixation test
19	Arya R	ELISA
20	Bibin B	RIA
21	Jishna Jayan	Opsonisation
22	Manya M	Antibody Diversity
23	Meera C	Immuno electron microscopy
24	Muhammed Nishad U P	Complement system
25	Nidhin M S	Complement system –Alternative pathway
26	Rahul N	Complement system –Classical Pathway
27	Rahul P R	Humoral immunity
28	Resmyraj R	Host parasite interaction
29	Shereefa Rahman M	Western Blotting
30	Sujith U	Hypersensitivity Type 1
31	Vivek U	Hypersensitivity Type 2

R. Binu
Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

CHEMISTRY ASSIGNMENT

TOPIC:- Crystal Systems and
Bravais lattices.

Submitted to,

Himaya Nam.

Submitted by,

Sakira. S

Roll No: 05

1st Year ELM.

~~23/12/23~~
23/12/23

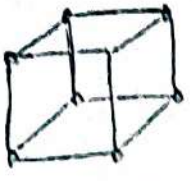

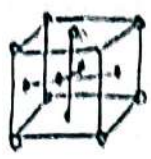

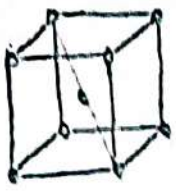
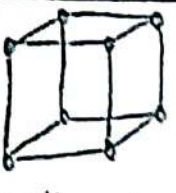
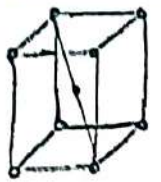
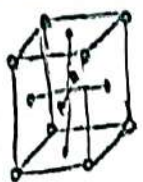


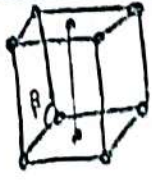


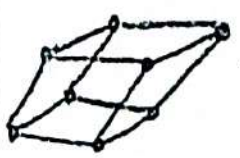
R. Binu

Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

CRYSTAL SYSTEMS

System	Unit cell characteristics	Essential Symmetry	Examples
Cubic	$a = b = c$ $\alpha = \beta = \gamma = 90^\circ$	Four three-fold axes	NaCl, KCl, CaF ₂ , FeS ₂ , Cu ₂ O, ZnS, NaClO ₃ , Pb, Au, Ag, Diamond, Alumina.
Tetragonal	$a = b \neq c$ $\alpha = \beta = \gamma = 90^\circ$	one four-fold axis.	SnO ₂ , TiO ₂ , KH ₂ PO ₄ , PbWO ₄ , ZrSiO ₄ , Sn
Orthorhombic (Rhombohedral)	$a \neq b \neq c \neq a$ $\alpha = \beta = \gamma = 90^\circ$	Three mutually perpendicular two-fold axes.	KNO ₃ , K ₂ SO ₄ , PbCl ₂ , BaSO ₄ , Mg ₂ SiO ₄ , Rhombohedral sulphur
Monoclinic	$a \neq b \neq c \neq a$ $\alpha = \gamma = 90^\circ \neq \beta$	one two-fold axis on mirror plane.	CaSO ₄ · 2H ₂ O, Na ₂ SO ₄ · 10H ₂ O, Na ₂ B ₄ O ₇ · 10H ₂ O, Monoclinic sulphur
Hexagonal	$a = b \neq c$ $\alpha = \beta = 90^\circ; \gamma = 120^\circ$	one six-fold axis	PbI ₂ , HgS, ZnO, CdS, Mg, Zn, Cd, Graphite.
Trigonal (Rhombohedral)	$a = b = c$ $\alpha = \beta = \gamma \neq 90^\circ$	one three-fold axis	NaNO ₃ , ICl, As, Sb, Bi
Triclinic	$a \neq b \neq c \neq a$ $\alpha \neq \beta \neq \gamma \neq \alpha = 90^\circ$	No axes on planes.	K ₂ C ₂ O ₇ , CaSO₄ CuSO ₄ · 5H ₂ O, H ₃ BO ₃

The unit cells of the 14 Bravais lattices

Primitive (simple) (P)	Body-centred (I)	Face-centred (F)	Base-centred (C)
 cubic P	 cubic I	 cubic F	
 Tetragonal P	 Tetragonal I		
 orthorhombic P	 orthorhombic I	 orthorhombic (F)	 orthorhombic (C)
 Monoclinic P			 Monoclinic C
 Hexagonal P			
 Trigonal (Rhombic) P			
 Triclinic P			

SREE NARAYANA COLLEGE ,ALATHUR
DEPARTMENT OF ECONOMICS
SEMINAR/ASSIGNMENT -2021-22

Sl No	Roll No	Name	TOPIC
1	U101	ADITHYA S	INTERNAL TRADE &INTERNATIONAL TRADE
2	U102	ANJALI H	TERMS OF TRADE
3	U103	ANSIYA Y	TERMS OF TRADE
4	U104	ARUN P K	TERMS OF TRADE
5	U105	ASWANI S	INTERNAL TRADE &INTERNATIONAL TRADE
6	U106	DEVIKA K	INTERNAL TRADE &INTERNATIONAL TRADE
7	U107	GOPIKA K	CLASSICAL THEORY OF TRADE
8	U108	JISHNA S	CLASSICAL THEORY OF TRADE
9	U109	JYOTHIS JAYAKRISHNAN	CLASSICAL THEORY OF TRADE
10	U110	KAVYA V	H.O THEOREM
11	U111	MAMATHA H	H.O THEOREM
12	U112	MRIJIL V	H.O THEOREM
13	U113	NIVYA D	H.O THEOREM
14	U114	ROSHETHA R	FREE TRADE AND PROTECTION



R. Binu
Principal
Sree Narayana College, Alathur
Palakkad-678 682, Kerala

15	U115	SARIKA R	FREE TRADE AND PROTECTION
16	U116	SNEHA J	FREE TRADE AND PROTECTION
17	U117	SNEHA S	W.T.O
18	U118	SRUTHI R	W.T.O
19	U119	SYAMJITH R	W.T.O
20	U120	VISHNUPRIYA S	NAFTA
21	U121	ABJIJITH S	NAFTA
22	U122	ADARSH S	NAFTA
23	U123	AJAY S	ASEAN
24	U124	AJITHA P	ASEAN
25	U125	AKHILA S	ASEAN
26	U126	ANAMIKA M	FOREIGN EXCHNGE MARKET
27	U127	ANJU M	FOREIGN EXCHNGE MARKET
28	U128	ARATHI G	FOREIGN EXCHNGE MARKET
29	U129	ARJUN M V	FOREIGN EXCHNGE MARKET
30	U130	ARYA MOL T	MINT PARITY THEORY
31	U131	ASWATHY R	MINT PARITY THEORY
32	U132	ATHUL R	MINT PARITY THEORY
33	U133	ATHULYA S	MINT PARITY THEORY
34	U134	DEEPA S	COMPONENTS OF FORGIGN EXCHANGE
35	U135	FARHANA FATHIMA A	COMPONENTS OF FORGIGN EXCHANGE
36	U136	JAISHNA U	COMPONENTS OF FORGIGN EXCHANGE



Principal
Sree Narayana College, Alathur
Palakkad-678 682; Kerala

37	U137	JAYALAKSHMI J	PURCHASING POWER PARITY THEORY
38	U138	LIJA S	PURCHASING POWER PARITY THEORY
39	U139	NAKSHATHRA N	PURCHASING POWER PARITY THEORY
40	U140	NOOR MUHAMMED A	PURCHASING POWER PARITY THEORY
41	U141	REETHU G	BOP
42	U142	RESHMITHA R	BOP
43	U143	REVATHY C R	BOP
44	U144	S NAVYA SREE	BOP EQUILIBRIUM AND DISEQUILIBRIUM
45	U145	SANDHYAMOL C K	BOP EQUILIBRIUM AND DISEQUILIBRIUM
46	U146	SANOOP KRISHNAN S	BOP EQUILIBRIUM AND DISEQUILIBRIUM
47	U147	SATHISH P T	FDI
48	U148	SHAHANA S	FDI
49	U149	SHAHANAS S	FDI
50	U150	SIJA S	IMF
51	U151	SOUMYA A	IMF
52	U152	SRUTHIN K S	IMF
53	U153	SRUTHY U	CURRENCY CONVERTABILITY
54	U154	SUMEESH S	CURRENCY CONVERTABILITY
55	U155	SURYA S	CURRENCY CONVERTABILITY
56	U156	VINOOP V	CURRENCY CONVERTABILITY




 Principal
 Sree Narayana College, Alathur
 Palakkad-678 682, Kerala

Environmental Issues & Sustainable development

Topic : Environment friendly products and technologies.



Submitted to
Prajeena teacher
Department of EWM.

Valueed
[Signature]
10/1/21

Submitted by
Jinly M
VIth Sem Bsc EWM
Rollno : 618
SN college, Alathur

R. Bineth
Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

SREE NARAYANA COLLEGE ALATHUR.

REPORT OF STUDENTS GRIEVANCE REDRESSAL CELL 2021-2022

In keeping with the national policy to create a healthy environment for students by strengthening institutional support system and legal machinery. The cell has been constituted in the college with the following members.

Dr. R. Bindu (Principal)

Smt. Anila Balan – Co-ordinator (Dept of Commerce)


Members:

1. Smt . Remya Rajan. E (Dept of English)
2. Sri Sudheesh T.V (Dept of Commerce)
3. Sri. Anil (Dept of English)
4. Kum.Bhavana–Student representative
5. Sri Udaya Prakash .B –PTA Vice President
6. Sathya Bhama –Ward Member (Representative of local body.)
7. Smt. Divya . H– NSS Programme Officer.
8. Dr.Jeothilakshmi. S.K – Staff Advisor.

The cell is constituted with the responsibility of ensuring the welfare of student community especially women. It also aims to settle their grievances with full justice. Any kind of major issue has to be reported first to the convener or tutor in charge , then to the HOD concerned. If justice is denied, she/he can then approach the Principal. The decision of the Principal is final at the college level.

Students are properly informed about this cell through orientation class to freshers and through college calendar. During this academic year, due to COVID -19 pandemic, the first term classes are through on-line mode. This year also there is no more grievance has been reported from any part of the campus. Some problems are reported and the cell attended these issues by providing solutions to them.


Smt. Anila Balan (Convener)


Principal
Sree Narayana College, Alathur
Palakkad- 678 682, Kerala

Syllabus

Syllabi of various departments are given below

UG & PG Courses

1. B,Com --> [javascript:nicTemp\(\);](#)
2. M.Com -->[javascript:nicTemp\(\);](#)
2. BA Functional English --> [javascript:nicTemp\(\);](#)
3. MA English -->[javascript:nicTemp\(\);](#)
4. B.Sc Microbiology -->[javascript:nicTemp\(\);](#)
5. BA Economics -->[javascript:nicTemp\(\);](#)
6. B.Sc Environment & Water Management -->[javascript:nicTemp\(\);](#)
7. B.Sc Chemistry -->[javascript:nicTemp\(\);](#)
8. B.Sc Zoology -->[javascript:nicTemp\(\);](#)
9. M.Sc Zoology -->[javascript:nicTemp\(\);](#)
10. B.Sc Botany -->[javascript:nicTemp\(\);](#)